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SEARCH REQUEST FORM

cientific and Technical Information Center 57382

Scientific and recumical information Center 7
Requester's Full Name And Hines 111-2 21 Examiner =: Date: 1/3/02
Art Unit: 1645 Phone Number 305-0487 Serial Number: 091335,581 Mail Box and Bldg/Room Location: CM1 943[10] Results Format Preferred (circle): PAPER DISK E-MAIL
/E/J If more than one search is submitted, please prioritize searches in order of need. ***********************************
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.
Title of Invention: Ceptide fre toxic Shock Syndrome
Inventors (please provide full names): Jason D. Bannan, Kumar Visyanathan
JOHN B. ZABRISKIE
Earliest Priority Filing Date: 61899
For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.
Mease search the inventor and
Mease search SEQ 10 NO: 3 and 34
Shanks
Point of Contact:
Mona Smith Technical Info. Specialist CM1 12C14 Tel: 308-3278

Vendors and cost where applicable STAFF USE ONLY Type of Search STN ___ NA Sequence (#)____ Searcher: ___ Dialog

09/335,581

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FILE 'HCAPLUS' ENTERED AT 11:26:24 ON 03 JAN 2002

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FILE COVERS 1907 - 3 Jan 2002 VOL 136 ISS 1 FILE LAST UPDATED: 2 Jan 2002 (20020102/ED)

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This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

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L1 14 SEA FILE=HCAPLUS ("BANNAN J D"/AU OR "BANNAN JASON"/AU OR "BANNAN JASON D"/IN OR "BANNAN JASON DAVID"/AU)

L2 19 SEA FILE=HCAPLUS ("VISVANATHAN K"/AU OR "VISVANATHAN K S"/AU OR "VISVANATHAN KANNA V"/AU OR "VISVANATHAN KUMAR"/AU OR "VISVANATHAN KUMAR"/IN)

73 SEA FILE=HCAPLUS ("ZABRISKIE J"/AU OR "ZABRISKIE J B"/AU) OR ("ZABRISKIE JOHN"/AU OR "ZABRISKIE JOHN B"/AU OR "ZABRISKIE JOHN B"/IN)

2 SEA FILE=HCAPLUS L1 AND L2 AND L3

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L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 2001:76096 HCAPLUS

DOCUMENT NUMBER: 134:250923

TITLE: Inhibition of bacterial superantigens by peptides and

antibodies

AUTHOR(S): Visvanathan, Kumar; Charles, Alain;

Page 2 09/335,581

Bannan, Jason; Pugach, Pavel; Kashfi, Khosrow;

Zabriskie, John B.

Laboratory of Clinical Microbiology and Immunology, CORPORATE SOURCE:

Rockefeller University, New York, NY, 10021, USA

Infect. Immun. (2001), 69(2), 875-884 SOURCE:

CODEN: INFIBR; ISSN: 0019-9567

American Society for Microbiology PUBLISHER:

Journal DOCUMENT TYPE: English LANGUAGE:

The pyrogenic exotoxins of group A streptococci and staphylococcal AB enterotoxins are a family of structurally related superantigens with similar biol. activity. Two distinct areas have been identified which have a highly conserved amino acid homol. in all of the toxin families. A no. of peptides were constructed from these regions, some of which were concatenated and polymd. to enhance their immunogenicity in animals. Antibodies prepd. against these polymd. peptides were used to serol. identify the majority of the superantigen toxins, block the biol. activities of the superantigens, and protect an exptl. animal model against shock. In addn. certain peptides were able per se to block up to 90% of the proliferative responses induced by the toxins. The peptide also proved protective in a septic shock model in mice. Binding expts. indicate that the peptide binds tightly to the major histocompatibility complex class II mol., thus preventing binding and hence activation of the superantigen. The selective and rapid binding of the peptide to the major histocompatibility complex class II mol. may lead to a novel therapeutic modality in treatment of superantigen-mediated diseases.

REFERENCE COUNT:

23

REFERENCE(S):

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- (1) Arad, G; Nat Med 2000, V6, P414 HCAPLUS
- (2) Bannan, J; Adv Exp Med Biol 1997, V418, P903 **HCAPLUS**
- (4) Blank, C; Eur J Immunol 1997, V27(4), P825 HCAPLUS
- (5) Eriksson, A; Microb Pathog 1998, V25, P279 HCAPLUS
- (6) Fridkis-Hareli, M; J Immunol 1998, V160(9), P4386 **HCAPLUS**

ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2002 ACS 2000:241505 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER:

132:290233

TITLE:

Sequences of peptides derived from staphylococcal and streptococcal toxins, and applications thereof in

diagnosing and treating toxic shock syndrome and

septic shock

INVENTOR(S):

Bannan, Jason D.; Visvanathan, Kumar;

Zabriskie, John B.

PATENT ASSIGNEE(S):

Rockefeller University, USA

PCT Int. Appl., 115 pp. SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO.

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                                       US 1998-168303
PRIORITY APPLN. INFO.:
                                                        A 19981007
                                                        A 19990618
                                       US 1999-335581
                                       WO 1999-US22180 W 19990924
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OTHER SOURCE(S): MARPAT 132:290233

AB This invention relates to amino acid sequences of peptides useful for providing protection against, or reducing the severity of, toxic shock and septic shock resulting from bacterial infections. More particularly, the invention provides peptides derived from consensus sequences of the family of staphylococcal and streptococcal toxins, and may be polymeric and/or carrier-conjugates thereof. The invention also relates to serum antibodies induced by the peptides and/or carrier-conjugates and their use to prevent, treat, or protect against the toxic effects of most, if not all, of the staphylococcal and streptococcal toxins. Antibodies may be induced by administration of a pharmaceutical compn. and/or vaccine contg. a peptide of the invention. The invention also relates to diagnostic assays and kits to detect the presence of staphylococcal and streptococcal toxins, or antibodies thereto.

REFERENCE COUNT:

REFERENCE(S):

- (1) Bannan, J; WO 9845325 A 1998 HCAPLUS
- (2) Bannan, J; INFECTIOUS DISEASE CLINICS OF NORTH AMERICA 1999, V13(2), P387 MEDLINE
- (3) National Jewish Center For Immunology And Respiratory Medicine; WO 9636366 A 1996 HCAPLUS
- (4) Schlievert, P; WO 9640930 A 1996 HCAPLUS
- (5) Terman, D; WO 9110680 A 1991 HCAPLUS

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US/08838413A PEPTIDES USE REDUCING SYM 31 S: FINNEGAN VENUE	, 0, P	US/08896933 S. ALLING E SRANTIGENS, 55002 SER: US/08/8 BJ7-07-18 94-06-02 Indows Versi Indows versi Lindows seque sensus seque sus and stre		
113A USEFUL FO SYMPTOMS	Score Pred. Mis		ALIGNMENTS	
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SHOCK	Length Inde	ENTEROTOXINS D COMPOUNDS AT 6,126, 6,126, pyogenes pol		
	ngth 14 Indels	EROTOXINS, OMPOUNDS G, 126, 945 G, 126, 945 from stapholycoc genes polypeptid		
SYNDROME	0	epti		sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence sequence
Ö	**	NXINS, NIDS 1221, 351 26, 945 stapholycoccus polypeptides		
	Gaps			1112 1113 1113 1113 1113 1113 1113 1113
		10		3. App 3. App 2. App 2. App 2. App 3. App 3. App 3. App 3. App 1. Appl 4. Appl 4. Appl 5. Appl 6. Appl 7. Appl 7. Appl 8. Appl 8. Appl 8. Appl 9. Appl

COMPUTER READABLE FORM: MEDIUM TYPE: FLOPPY

FLOPPY DISK

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US-08-838-413A-11

; Sequence 11, Application US/08838413A

; Patent No. 6075119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TOPOLOGY: UNKNOWN ; MOLECULE TYPE: PEPTIDE US-08-838-413A-3
                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/838,413A
FILING DATE: 07-APR-1997
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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TELEPHONE: (212)758-4800
TELEPAS: (212)751-6849
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/
FILING DATE: 07-APR-1997
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
CLASSIFICATION: 536
                 ATTORNEY/AGENT INFORMATION:
NAME: MORRY, MARY J.
                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: PE
TITLE OF INVENTION: RE
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: WORDERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: MORRY J.
REGISTRATION NUMBER: 34,398
REFERENCE/DOCKET NUMBER: 20
                                                    FILING DATE: 536
                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: MORGAN & FINNEGAN
STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
REGISTRATION NUMBER: 34,398
                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                    COUNTRY: USA
ZIP: 10154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CMYGGVTLHEGN 12
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1 CMYGGVTEHEGN 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: AMINO ACID
STRANDEDNESS: UNKNOWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                        PEPTIDES USEFUL FOR REDUCING SYMPTOMS OF TOXIC SHOCK SYNDROME
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Pred. No. 6e-05;
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Best Loc Matches Query Match

Local Similarity

90.1%; 91.7%;

Score 64; DB 3; Pred. No. 7.1e-05;

Length 14;

Conservative

0;

Mismatches

Indels

0;

Gaps

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US-08-838-413A-5
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                                                                                                                                     CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: MORRY, MARY J.
REGISTRATION NUMBER: 30,398
REFERENCE/DOCKET NUMBER: 2010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 90.
Best Local Similarity 83.
Matches 10; Conservative
                                                                                                              TELEFAX: (212)751-684
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -08-838-413A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION: INFORMATION:
TELEPHONE: (212)758-4800
TELEFAX: (212)751-6849
INFORMATION FOR SEQ ID NO: 11:
                                                                                                                                                                                                                                                                                                                                                      COMPOTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDERFECT 5.1
CURRENT APPLICATION DATA:
               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/838,413A
FILING DATE: 07-APR-1997
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: PEPTIDES 0:
TITLE OF INVENTION: REDUCING SI
NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
                                                                                             SEQUENCE CHARACTERISTICS:
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                               TOPOLOGY:
                                            STRANDEDNESS:
                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                            ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
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                                                            AMINO ACID
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          345 PARK AVENUE
                                                                                                                          : (212)758-4800
(212)751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                UNKNOWN
             PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                           FLOPPY DISK
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                                              UNKNOWN
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83.3%;
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Pred. No.
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6e-05;
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CMYGGVTLHEGN 12

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CURRENT APPLICATION NUMBER: US/08/896,933; CURRENT FILING DATE: 1997-07-18

EARLIER APPLICATION NUMBER: 08/252,978

EARLIER FILING DATE: 1994-06-02

INUMBER OF SEO ID NOS: 34

SOFTWARE: FastSEO for Windows Version 3.0

SEQ ID NO 5

LENGTH: 14

TYPE: PRT

ORGANISM: Staphylococcus aureas
US-08-896-933-5
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Best Local Similarity
Matches 10; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 7, Application US/08838413A Patent No. 6075119
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/838,413A
FILING DATE: 07-APR-1997
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
FILING DATE:
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: MORRY, MARY J.
REGISTRATION NUMBER: 34,398
REFERENCE/DOCKET NUMBER: 2016-4010
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -08-838-413A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: TUMOR KILLING EFFECTS OF ENTEROTOXINS, TITLE OF INVENTION: SUPERANTIGENS, AND RELATED COMPOUNDS FILE REFERENCE: 09629/005002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CMYGGVTLHEGN 12
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Pred. No. 7
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1 CMYGGVTLHEGN 12

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; TYPE: AMINO ACID
; STRANDEDNESS: UNKNO
; TOPOLOGY: UNKNOWN
; MOLECULE TYPE: PEPTII
US-08-838-413A-8
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                                                                                                                                                                            CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION UMBER:
FILING DATE:
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: MORRY, MARY J.
REGISTRATION UMBER: 34 398
REFERENCE/DOCKET NUMBER: 2016:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)758-4800
TELEPHONE: (212)751-6849
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 8, Application US/08838413A Patent No.: 6075119
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   Matches
                 Query Match
Best Local :
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: PEPTIDES US
TITLE OF INVENTION: REDUCING SI
NUMBER OF SEQUENCE: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
STREET: 345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: WORDPERFECT CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        y Match 90.18;
Local Similarity 91.78;
                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 07-API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 345 PARE
CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: AMINO ACID STRANDEDNESS: UNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
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 11; · Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                   UMBER: US/08/838,413A
07-APR-1997
                                                                                                 PEPTIDE
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                                                                                                                                  UNKNOWN
                 90.1%;
91.7%;
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Score 64; DB 3; Pred. No. 0.0002; 0; Mismatches
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Pred. No. 0.00019;
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                               Length 38;
 1; Indels
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CMYGGVTEHEGN

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TITLE OF INVENTION: TUMOR KILLING EFFECTS OF ENTEROTOXINS,
TITLE OF INVENTION: SUPERANTIGENS, AND RELATED COMPOUNDS
FILE REFERENCE: 09629/005002
CURRENT APPLICATION NUMBER: US/08/896,933
CURRENT FILING DATE: 1997-07-18
EARLIER APPLICATION NUMBER: 08/252,978
EARLIER FILING DATE: 1994-06-02
NUMBER OF SEQ ID NOS: 34
SOFTWARE: FastSEQ for Windows Version 3.0
EENGTH: 238
TYPE: PAT
ORGANISM: Staphylococcus aureas
US-08-896-933-28
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US-08-896-933-28
US-08-896-933-28
; Sequence 28, Applica
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                                                                                                                                 RESULT 10

US-08-838-413A-9

: Sequence 9, Application US/08838413A

: Patent No. 6075119

: Patent No. 6075119
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; TYPE: PRT
; ORGANISM: Staphylococcus aureas
US-08-896-933-27
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; Sequence 27, Application US/08896933

; Patent No. 6221351
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Best Local Similarity
Matches 10; Conserv
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NUMBER OF SEQ ID NOS: 34
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 27
LENGTH: 239
                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 10; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Terman, David S.
TITLE OF INVENTION: TUMOR KILLING EFFECTS OF ENTEROTOXINS,
TITLE OF INVENTION: SUPERANTIGENS, AND RELATED COMPOUNDS
FILE REFERENCE: 09629/005002
FILE REFERENCE: 09629/005002
CURRENT APPLICATION NUMBER: US/08/896,933
CURRENT FILING DATE: 1997-07-18
CURRENT FILING DATE: 1997-07-18
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APPLICANT: Terman, David S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EARLIER APPLICATION NUMBER: 08/252,978
            TITLE OF INVENTION:
                                                                                            APPLICANT:
                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                             110 CMYGGITKHEGN 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109 CMYGGITKHEGN 120
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PEPTIDES USEFUL FOR
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83.3%;
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83.3%;
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Pred. No. 0.0014;
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Pred. No. 0.
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RESULT 11
US-08-838-413A-13
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                                                                                                                                                                                                                                                                                                                           Patent No. 6075119
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 2016
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)758-4800
TELEPAX: (212)751-6849
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                          Sequence 13, Application US/08838413A Patent No. 6075119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
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COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/838,413A
FILING DATE: 07-APR-1997
                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                            APPLICANT:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: MORRY, MARY J.
REGISTRATION NUMBER: 34,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/838,413A
FILING DATE: 07-APR-1997
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
CLASSIFICATION: 536
CCASSIFICATION: 536
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MEDIUM TYPE: FLOPPY DISK
                                                                                  COMPUTER:
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COMPRET: 345 PARK AVENUE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                  COUNTRY:
                                                                                                                                                                   STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: AMINO ACID
STRANDEDNESS: UNKI
TOPOLOGY: UNKNOWN
                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CMYGGVTLHDNN 12
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                                                                                                                                                 USA
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345 PARK AVENUE
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83.3%;
                                                                                                                                                                                                                                               PEPTIDES USEFUL FOR REDUCING SYMPTOMS OF TOXIC SHOCK SYMPTOMS 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REDUCING SYMPTOMS OF TOXIC SHOCK SYNDROME 31
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Pred. No. 0.00013;
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CLASSIFICATION: 536 PRIOR APPLICATION DATA:

APPLICATION NUMBER:

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; ORGANISM: Staphylococcus aureus US-08-896-933-1
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NAME: MORRY, MARY J.

REGISTRATION NUMBER: 34,398

REFERENCE/DOCKET NUMBER: 2016-4010

TELECOMMUNICATION INFORMATION:

TELEPHONE: (212)758-4800

TELEPHONE: (212)751-6849

INFORMATION FOR SEQ ID NO: 13:

SEQUENCE CHARACTERISTICS:

LENGTH: 12

TYPE: ANYLOGIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Terman, David S.
TITLE OF INVENTION: TUMOR KILLING EFFECTS OF ENTEROTOXINS,
TITLE OF INVENTION: SUPERANTIGENS, AND RELATED COMPOUNDS
FILE REFERENCE: 09629/005002
CURRENT APPLICATION NUMBER: US/08/896,933
CURRENT APPLICATION NUMBER: US/08/896,933
CURRENT FILING DATE: 1997-07-18
EARLIER APPLICATION NUMBER: 08/252,978
EARLIER FILING DATE: 1994-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 34
SOFTWARE: FASESEQ for Windows Version 3.0
SEQ ID NO 1
LENGTH: 14
TYPE: PRT
Sequence 9, Application US/08896933
Patent No. 6221351
GENERAL INFORMATION:
APPLICANT: Terman, David S.
TITLE OF INVENTION: TUMOR KILLING EFFECTS OF ENTEROTOXINS,
TITLE OF INVENTION: SUPERANTIGENS, AND RELATED COMPOUNDS
FILE REFERENCE: 09629/005002
CURRENT APPLICATION NUMBER: US/08/896,933
CURRENT FILING DATE: 1997-07-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Şequence 1, Application US/08896933
Patent No. 6221351
                                                                                                                                                                                                                                                                                                                                                       Matches
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Best Local Similarity
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: AMINO ACID
STRANDEDNESS: UNKNOWN
TOPOLOGY: UNKNOWN
MOLECULE TYPE: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 536
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                                                                                                                                                                                                                                                                                            1 CMYGGVTLHEGN 12
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83.3%;
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Pred. No. 0.00015;
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Pred. No. 0.00013;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Staphylococcus aureas
US-08-896-933-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EARLIER APPLICATION NUMBER: 08/252,978
EARLIER FILING DATE: 1994-06-02
NUMBER OF SEQ ID NOS: 34
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 9
                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 5, Application US/08220378 Patent No. 5545716
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Best Local Similarity
                                                                              Query Match
                                                                                                                                                                                                                          TELEFAX: 904-372-5800
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: UF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 904-375-8100
TELEFAX: 904-372-5800
                                                                                                                                                                                                                                                                                                                                                                                   FILING LAND. 530
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 07/941,497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Johnson, Howard M
APPLICANT: Pontzer, Carol H.
APPLICANT: Griggs, Nathan D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 14
                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 07/9
FILING DATE: 08-SEP-1992
ATTORNEY/AGENT INFORMATION:
NAME: Saliwanchik, David R.
REGISTRATION NUMBER: 31,794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0
                                                                                                                                                            STRANDEDNESS:
TOPOLOGY: 11
                                                               Local Similarity
                                                                                                                                                                                           TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: U
ZIP: 32606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                              LENGTH:
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1 CMYGGVTLHEGN 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Saliwanchik & Saliwanchik
2421 N.W. 41st Street, Suite A-1
                                                                                                                                                                                                                23 amino acids
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                                                 Conservative
                                                                                                                                                                 linear
                                                                                                                                             peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Floppy disk
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83.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Superantigen Agonist and Antagonist
                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/220,378
                                                                                                                                                                                                                                                                                                                           31,794
                                                                                                                                                                                                                                                                                                               UF126.C1
                                                               Score 62; DB 1;
Pred. No. 0.00026;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 62; DB 4;
Pred. No. 0.00015;
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                                                 Mismatches
                                                 1; Indels
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В

5 CMYGGVTLHDNN 16

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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION UNBER: US/08/696,012
FILING DATE: 12-AUG-1996
CLASSIFICATION NUMBER: 08/220,378
FILING DATE: 29-WAR-1994
APPLICATION NUMBER: 08 07/941,497
FILING DATE: 08-SEP-1992
APPLICATION NUMBER: US 07/941,497
FILING DATE: 08-SEP-1992
ATTORNEY/AGENT INFORMATION:
NAME: Saliwanchik, David R.
REGISTRATION NUMBER: UF126.C1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 904-375-8100
TELEPAN: 904-372-5800
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 23 amino acids
STRANDEDNESS: Single
TOPOLOGY: linear

LOT FOUR TYPE: nebtide
Search completed: January 2, 2002, 20:46:42 Job time: 11488 sec
                                                                                                                                                                                                                                                                                                            ; TOPOLOGY: 1:
; MOLECULE TYPE:
US-08-696-012-5
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US-08-696-012-5
US-08-696-012-5
; Sequence 5, Application US/08696012
; Patent No. 5859207
; Patent No. 5859207
                                                                                                                                                                                                Query Match 87.3%; Score 62; DB 2; Best Local Similarity 83.3%; Pred. No. 0.00026; Matches 10; Conservative 1; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Johnson, Howard M.
APPLICANT: Pontzer, Carol H.
APPLICANT: Griggs, Nathan D.
TITLE OF INVENTION: Superantigen Agonist and Antagonist
TITLE OF INVENTION: Peptides
NUMBER OF SEQUENCES: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: Saliwanchik Saliwanchik
STREET: 2421 N.W. 41st Street, Suite A-1
CITY: Gainesville
STATE: FL
                                                                                                        1 CMYGGVTLHEGN 12
...||||||||||
5 CMYGGVTLHDNN 16
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COUNTRY: US
ZIP: 32606
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    Mismatches

                                                                                                                                                                                           1; Indels
                                                                                                                                                                                                                                  Length 23;
                                                                                                                                                                                         0;
                                                                                                                                                                                      Gaps
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Although the foregoing invention has been described in detail for purposes of clarity of understanding, certain modifications may be practiced within the scope of the appended claims. While the above findings apply to an experimental animal model, it should be recognized that the tumor used 5 herein is an excellent model of human cancer. Therapeutic success in the canine model with PACC system (described in a series of patent applications, the latest of which is identified as Ser. No. 331,095), the forerunner of the present invention, was transferred to humans in which objective 10 tumor regressions were obtained in four of the first five consecutive patients treated. Thus, the data given herein for rabbits with carcinoma is expected to be predictive of success when the compositions are applied to humans with spontaneous tumors as well.

In the method of treating cancer in a patient utilizing a single step of administering Staphylococcal enterotoxins or enterotoxin fragments, a tumoricidally effective amount of the enterotoxin or enterotoxin fragment is between 0.5 μ g (enterotoxin) per kg (body weight) and 150 μ g (enterotoxin) 20 per kg (body weight). This tumoricidally effective amount applies to the enterotoxins which are chemically derivatized.

We claim:

- 1. A method of treating a subject having a tumor comprising administering to the subject a tumoricidally effective 25 amount of a toxin selected from the group consisting of a staphylococcal enterotoxin and a streptococcal pyrogenic exotoxin.
- 2. The method of claim 1, wherein the toxin is a staphylococcal enterotoxin.
- 3. The method of claim 2 wherein the staphylococcal enterotoxin is selected from the group consisting of enterotoxin A, B, C, D, E, and F.
- 4. The method of claim 2 wherein the staphylococcal enterotoxin is a biologically active fragment of an enterotoxin.
- 5. The method of claim 2 wherein the staphylococcal enterotoxin has been chemically derivatized to minimize toxicity while retaining tumoricidal activity.

- 6. The method of claim 1 wherein the toxin is administered by intravenous inoculation.
- 7. The method of claim 1 wherein the tumor is a carcinoma.
- 8. A method of treating a patient having a tumor comprising administering to the patient a tumoricidally effective amount of a toxin selected from the group consisting of a staphylococcal enterotoxin and a streptococcal pyrogenic exotoxin.
- 9. The method of claim 8 wherein the toxin is a staphylococcal enterotoxin.
- 10. The method of claim 9 wherein the staphylococcal enterotoxin is selected from the group consisting of enterotoxin A, B, C, D, E, and F.
 - 11. The method of claim 10 wherein the staphylococcal enterotoxin is enterotoxin ${\bf B}.$
 - 12. The method of claim 8 wherein the tumor is a carcinoma.
 - 13. The method of claim 9 wherein the staphylococcal enterotoxin is a biologically active fragment of an enterotoxin.
- 14. The method of claim 9 wherein the staphylococcal enterotoxin has been chemically derivatized to minimize toxicity while retaining tumoricidal activity.
 - 15. The method of claim 9 wherein the chemical derivatization is carboxymethylation.
- 16. The method of claim 15 wherein the carboxymethylated toxin comprises carboxymethylated enterotoxin B.
- 17. The method of claim 11 wherein the enterotoxin B has been purified to remove alpha hemolysin.
- 18. The method of claim 11 wherein the enterotoxin B contains no more than 0.1 microgram endotoxin per milligram enterotoxin B.
- 19. The method of claim 8 wherein the toxin is administered by intravenous inoculation.

* * * * *

60

-continued

225 235 240 230 Arg Ala Lys Leu Asp Lys <210> SEQ ID NO 34 <211> LENGTH: 27 <212> TYPE: PRT <213> ORGANISM: Staphylococcal <400> SEQUENCE: 34 Ser Glu Lys Ser Glu Glu Ile Asn Glu Lys Asp Leu Arg Lys Lys Ser Glu Leu Gln Gly Thr Ala Leu Gly Asn Leu Lys
20 25

What is claimed is:

- 1. A method of treating cancer in a tumor-bearing host, comprising contacting the immune system of said host with tumor cells that are transfected with a nucleic acid encoding a superantigen which is expressed in said transfected cells, thereby inducing a tumoricidal immune response and treating said cancer.
- 2. A method of treating cancer in a tumor-bearing host, comprising contacting the immune system of said host with accessory cells, immunocytes or fibroblasts that are transfected with a nucleic acid encoding a superantigen which is 30 expressed in said transfected cells, thereby inducing a tumoricidal immune response and treating said cancer.
- 3. The method of claim 1 or 2 wherein the superantigen is selected from the group consisting of a Staphylococcal enterotoxin, a Streptococcal pyrogenic exotoxin, toxic shock syndrome toxin, a mycoplasma antigen, a mycobacteria antigen, a minor lymphocyte stimulating antigen, a heat shock protein, a stress peptide, and a derivative thereof.
- 4. The method of claim 1 or 2 wherein the tumor cells, accessory cells, immunocytes or fibroblasts are transfected 40 is a human. in vivo.
- 5. The method of claim 1 or 2 wherein the tumor cells, accessory cells, immunocytes or fibroblasts are transfected in vitro.
- 6. The method of claim 5 wherein the transfected cells are 45 tumor cells.
- 7. The method of claim 1 or 2 wherein the contacting
- (i) incubating the transfected cells ex vivo with an immunocyte population to tumoricidally activate the 50 cells are transfected in vitro. population, and
- (ii) administering the activated population to the tumorbearing host.
- 8. The method of claim 7 wherein the activated immuadministration.
- 9. The method of claim 8 wherein the in vitro culture includes interleukin 2
- 10. The method of claim 7, wherein the immunocyte population being activated comprises T cells.
- 11. The method of claim 1 or 2, wherein the superantigen is expressed on the surface of the transfected cells.
- 12. The method of claim 1 or 2, wherein the transfected cells express MHC class II molecules.
- 13. The method of claim 1 or 2, wherein the contacting 65 comprises administering the transfected cells to the tumorbearing host.

- 14. The method of claim 1 or 2, wherein the host is a human.
- 15. A method of killing tumor cells in a mammal, comprising contacting tumor cells that are transfected with nucleic acid encoding a superantigen or biologically active polypeptide of a superantigen with the immune system of
 - wherein expression of said superantigen or polypeptide by the transfected cells produces a tumoricidal immune response resulting in the killing of said tumor cells.
- 16. A method of killing tumor cells in a mammal, comprising contacting accessory cells, immunocytes, or fibroblasts that are transfected with nucleic acid encoding a superantigen or biologically active polypeptide of a superantigen with the immune system of said mammal,
 - wherein expression of said superantigen or polypeptide by the transfected cells produces a tumoricidal immune response resulting in the killing of said tumor cells.
- 17. The method of claim 15 or 16, wherein the mammal
- 18. The method of claim 15 or 16, wherein the superantigen is selected from the group consisting of a Staphylococcal enterotoxin, a Streptococcal pyrogenic exotoxin, toxic shock syndrome toxin, a mycoplasma antigen, a mycobacteria antigen, a minor lymphocyte stimulating antigen, a heat shock protein, a stress peptide, and a derivative thereof.
- 19. The method of claim 15 or 16, wherein the transfected cells are transfected in vivo.
- 20. The method of claim 15 or 16, wherein the transfected
- 21. The method of claim 20, wherein the transfected cells are tumor cells, and the contacting comprises administering the transfected tumor cells to the mammal.
- 22. The method of claim 15 or 16, wherein the contacting nocytes are expanded by further in vitro culture prior to their 55 comprises administering the transfected cells to the mammal.
 - 23. The method of claim 15 or 16, wherein the contacting
 - (i) incubating the transfected cells ex vivo with an immunocyte population to tumoricidally activate the population, and
 - (ii) administering the activated population to the mammal.
 - 24. The method of claim 23, wherein the immunocyte population being activated comprises T cells.
 - 25. The method of claim 23, wherein the activated immunocytes are expanded by in vitro culture prior to their administration.

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- 26. The method of claim 25, wherein the in vitro culture includes interleukin 2.
- 27. The method of claim 15 or 16, wherein the superantigen is expressed on the surface of the transfected cells.
- 28. The method of claim 15 or 16, wherein the transfected 5 cells expresses MHC class II molecules.
- 29. A method for increasing antitumor immunity against a tumor in a mammal, comprising contacting tumor cells that are transfected with nucleic acid encoding a superantigen or biologically active polypeptide of a superantigen with the 10 immune system of said mammal,

wherein expression of the superantigen or polypeptide by the transfected cells induces T cell proliferation and increases said antitumor immunity.

30. A method for increasing antitumor immunity against 15 a tumor in a mammal, comprising contacting accessory cells, immunocytes or fibroblasts that are transfected with nucleic acid encoding a superantigen or biologically active polypeptide of a superantigen with the immune system of said mammal, 20

wherein expression of the superantigen or polypeptide by the transfected cells induces T cell proliferation and increases said antitumor immunity.

- 31. The method of claim 29 or 30, wherein the mammal is a human.
- 32. The method of claim 29 or 30, wherein the superantigen is selected from the group consisting of a Staphylococcal enterotoxin, a Streptococcal pyrogenic exotoxin, toxic shock syndrome toxin, a mycoplasma antigen, a mycobacteria antigen, a minor lymphocyte stimulating antigen, a heat shock protein, a stress peptide, and a derivative thereof.
- 33. The method of claim 29 or 30, wherein the tumor cells, accessory cells, immunocytes or fibroblasts are transfected in vivo.
- 34. The method of claim 29 or 30, wherein the tumor cells, accessory cells, immunocytes or fibroblasts are transfected in vitro.
- 35. The method of claim 34, wherein the transfected cells are tumor cells, and the contacting comprises administering the transfected tumor cells to the mammal.

- 36. The method of claim 29 or 30, wherein the contacting comprises administering the transfected cells to the mammal.
- 37. The method of claim 29 or 30, wherein the contacting comprises:
 - (i) incubating the transfected cells ex vivo with an immunocyte population to tumoricidally activate the population, and
 - (ii) administering the activated population to the mammal.
- 38. The method of claim 37, wherein the immunocyte population being activated comprises T cells.
- 39. The method of claim 37, wherein the activated immunocytes are expanded by in vitro culture prior to their administration.
- 40. The method of claim 39, wherein the in vitro culture includes interleukin 2.
- 41. The method of claim 29 or 30, wherein the superantigen is expressed on the surface of the transfected cells.
- 42. The method of claim 29 or 30, wherein the transfected cells express MHC class II molecules.
- 43. A method for treating cancer in a tumor-bearing host, comprising administering a nucleic acid encoding a superantigen to said tumor in vivo to transfect tumor cells, wherein expression of said superantigen induces a tumoricidal immune response, thereby treating said cancer.
- 44. A method of killing tumor cells in a mammal, comprising administering a nucleic acid encoding a superantigen or biologically active polypeptide of a superantigen to said tumor in vivo to transfect tumor cells, wherein expression of the superantigen or polypeptide produces a tumoricidal immune response resulting in the killing of said tumor cells.
- 45. A method for increasing antitumor immunity against a tumor in a tumor-bearing mammal, comprising administering a nucleic acid encoding a superantigen or biologically active polypeptide of a superantigen to said tumor in vivo to transfect tumor cells, wherein expression of the superantigen or polypeptide induces T cell proliferation and increases said antitumor immunity.
- 46. The method of any of claims 43-45 wherein said mammal or host is a human.

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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Peptide #6 for red
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Staphylococcal/str
Peptide #6343, der
Peptide #3 for red
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2 72 100 0 38 22 AAY72181 4 67 93.1 12 21 AAY97845 5 67 93.1 12 21 AAY97846 5 67 93.1 12 22 AAY72183 6 67 93.1 12 22 AAY72184 7 67 93.1 238 12 AAR13208 7 67 93.1 238 12 AAR13208 8 67 93.1 238 12 AAR13206 9 67 93.1 239 12 AAR13207 67 93.1 239 12 AAR13207 67 93.1 239 14 AAR45014 8 67 93.1 239 14 AAR45014 9 67 93.1 239 14 AAR45015 16 67 93.1 239 19 AAR45015 17 67 93.1 239 19 AAR45015 18 67 93.1 239 20 AAY06254 18 67 93.1 239 20 AAY06254 18 67 93.1 239 20 AAY06255 18 67 93.1 239 20 AAY06255 18 67 93.1 239 20 AAY06256 19 67 93.1 239 20 AAY06258 10 67 93.1 239 20 AAY06258 11 67 93.1 239 20 AAY06258 12 67 93.1 239 20 AAY06258 13 67 93.1 239 20 AAY06253 14 67 93.1 239 20 AAY06253 15 67 93.1 239 20 AAY06253 16 67 93.1 239 20 AAY06253 17 67 93.1 239 20 AAY06253 18 67 93.1 239 20 AAY06253 18 67 93.1 239 21 AAY70106 18 67 93.1 239 22 AAB67341 28 67 93.1 239 22 AAB67342 29 67 93.1 239 23 AAY06253 20 67 93.1 239 23 AAY06253 21 AAY70106 22 AAB67342 23 AAY06253 23 AAY06253 24 AAB67342 25 AAB67342 26 67 93.1 239 21 AAY70106 27 93.1 265 21 AAY70106 28 AAY062631 28 67 93.1 265 21 AAY70106 29 67 93.1 265 21 AAY70106 20 67 93.1 266 21 AAY54464 21 AAY54464 21 AAY54464 22 AAB67342 23 AAB67342 24 AAB67342 25 AAB67342 26 AAY062631 27 AAY062631 28 AAY062631 29 AAY062631 20 AAY062631 20 AAY062631 21 AAY062631 22 AAB67342 23 AAB67342 24 AAB67342 25 AAB67342 26 AAY062631 27 AAY062631 28 AAY062631 28 AAY062631 28 AAY062631 28 AAY062631 29 AAY062631 20 AAY062631 20 AAY062631 21 AAY062631 22 AAB67342 23 AAB67342 24 AAB67342 25 AAB67342 26 AAY062631 27 AAY062631 28 AAY062		AAY97850	21	12	7.	63	43
2 72 100.0 38 22 AAY72181 4 67 93.1 12 21 AAY97845 5 467 93.1 12 22 AAY97846 5 767 93.1 12 22 AAY72183 5 767 93.1 12 22 AAY72184 6 6 7 93.1 23 12 22 AAY72184 7 6 7 93.1 238 12 AAR13208 6 7 93.1 238 14 AAR45016 6 8 93.1 238 12 AAR13206 6 9 3.1 239 12 AAR13206 6 9 3.1 239 12 AAR13206 6 9 3.1 239 14 AAR45014 6 6 7 93.1 239 14 AAR45015 6 7 93.1 239 14 AAR45015 6 7 93.1 239 14 AAR45015 6 7 93.1 239 19 AAW6647 7 6 7 93.1 239 20 AAY06254 6 7 93.1 239 20 AAY06255 6 7 93.1 239 20 AAY06255 6 7 93.1 239 20 AAY06255 6 7 93.1 239 20 AAY06256 7 9 3.1 239 20 AAY06255 8 6 7 93.1 239 20 AAY06256 8 6 7 93.1 239 20 AAY06251 9 6 7 93.1 239 20 AAY06252 6 7 93.1 239 20 AAY06252 8 6 7 93.1 239 20 AAY06255 9 6 7 93.1 239 21 AAY00206 8 6 7 93.1 239 22 AAB67341 8 6 7 93.1 239 21 AAY70106 8 6 7 93.1 239 22 AAB67342 8 6 7 93.1 239 23 AAW66737 8 6 7 93.1 239 24 AAW66737 8 6 7 93.1 255 18 AAW6737 8 5 5 7 93.1 265 21 AAY70108 8 5 5 7 93.1 266 21 AAY70108 8 5 5 7 93.1 266 21 AAY70108 8 5 5 7 93.1 266 21 AAY70108	Amino acid sequ	AAY54464	21	266	ω	67	42
2 72 100.0 38 22 AAY72181 4 67 93.1 12 21 AAY97845 5 67 93.1 12 22 AAY97846 6 67 93.1 12 22 AAY72183 6 67 93.1 12 22 AAY72184 6 67 93.1 238 12 AAR13208 6 67 93.1 238 14 AAR45016 6 67 93.1 238 12 AAR13208 6 67 93.1 238 12 AAR13208 6 67 93.1 239 12 AAR13207 6 67 93.1 239 12 AAR13207 6 67 93.1 239 14 AAR45014 7 6 7 93.1 239 14 AAR45014 7 6 7 93.1 239 14 AAR45014 7 6 7 93.1 239 14 AAR45015 7 6 7 93.1 239 20 AAY06254 8 6 7 93.1 239 20 AAY06254 8 6 7 93.1 239 20 AAY06255 8 6 7 93.1 239 20 AAY06256 8 7 93.1 239 20 AAY06256 9 8 7 93.1 239 20 AAY06256 9 8 7 93.1 239 20 AAY06251 1 6 7 93.1 239 20 AAY06256 1 7 93.1 239 20 AAY06251 2 6 7 93.1 239 20 AAY06252 2 6 7 93.1 239 20 AAY06253 3 6 7 93.1 239 20 AAY06253 3 6 7 93.1 239 20 AAY06253 4 6 7 93.1 239 20 AAY06252 5 6 7 93.1 239 21 AAY0106 5 6 7 93.1 239 22 AAB67341 5 6 7 93.1 239 22 AAB67342 5 6 7 93.1 239 22 AAB67342 5 6 6 93.1 239 23 AAW06737 6 7 93.1 239 24 AAW06737 6 7 93.1 239 25 AAB67342 6 8 7 93.1 239 26 AAW06737 7 6 7 93.1 255 18 AAW06737 8 5 5 6 7 93.1 265 21 AAY70105 8 6 7 93.1 265 21 AAY70105 8 6 7 93.1 266 21 AAY90219	Staphylococcal o	AAY70108	21	266	ω.	67	41
2 72 100.0 38 22 AAY72181 4 67 93.1 12 21 AAY97845 5 67 93.1 12 21 AAY97846 5 67 93.1 12 22 AAY72183 6 67 93.1 12 22 AAY72184 7 67 93.1 238 14 AAR45016 8 67 93.1 238 12 AAR13208 8 67 93.1 238 12 AAR13208 9 67 93.1 239 12 AAR13207 67 93.1 239 12 AAR13207 67 93.1 239 14 AAR45014 167 93.1 239 14 AAR45014 17 67 93.1 239 19 AAR45015 18 67 93.1 239 20 AAY06254 18 67 93.1 239 20 AAY06255 18 67 93.1 239 20 AAY06255 18 67 93.1 239 20 AAY06256 18 67 93.1 239 20 AAY06257 18 67 93.1 239 20 AAY06258 18 67 93.1 239 20 AAY06253 20 67 93.1 239 20 AAY06253 21 67 93.1 239 20 AAY06253 22 67 93.1 239 20 AAY06253 23 67 93.1 239 20 AAY06253 24 AAR57340 25 67 93.1 239 22 AAB67341 26 67 93.1 239 22 AAB67342 27 AAB67342 28 AAB67342 28 AAB67342 28 AAB67342 28 AAB67342 28 AAB67342 28 AAB91ylococcust 28 AAB67342 28 AA	Plant-optimized	AAY92319	21	266	ω.	67	40
2 72 100.0 38 22 AAY72181 4 67 93.1 12 21 AAY97845 5 67 93.1 12 22 AAY97846 5 67 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72184 6 6 7 93.1 12 22 AAY72184 7 6 7 93.1 238 12 AAR13208 6 6 93.1 238 12 AAR13208 6 7 93.1 238 12 AAR13208 6 8 93.1 239 12 AAR13206 6 93.1 239 12 AAR13206 6 93.1 239 12 AAR13207 6 93.1 239 14 AAR45014 6 6 7 93.1 239 14 AAR45015 6 6 7 93.1 239 14 AAR45015 6 6 7 93.1 239 14 AAR45015 6 6 7 93.1 239 19 AAW6647 7 8 3.1 239 20 AAY06254 6 7 93.1 239 20 AAY06255 6 7 93.1 239 20 AAY06256 6 8 93.1 239 20 AAY06257 6 8 93.1 239 20 AAY06258 6 9 93.1 239 20 AAY06258 6 9 93.1 239 20 AAY06251 6 6 93.1 239 20 AAY06252 6 7 93.1 239 20 AAY06252 6 8 93.1 239 20 AAY06253 6 9 93.1 239 20 AAY06255 6 9 93.1 239 20 AAY06252 6 7 93.1 239 20 AAY06252 6 8 93.1 239 20 AAY06253 6 8 93.1 239 21 AAY06253 6 9 93.1 239 22 AAY06253 6 8 93.1 239 23 AAY06253 6 9 93.1 239 24 AAY06253 6 9 93.1 239 25 AAY06253 6 7 93.1 239 27 AAY06253 6 8 93.1 239 28 AAY06253 6 9 93.1 239 28 AAY06253 6 9 93.1 239 28 AAY06253 6 7 93.1 239 28 AAY06253 6 8 93.1 239 28 AAY06253 6 9 93.1 239 29 AAY06253 6 8 93.1 239 21 AAY06253 6 8 93.1 239 22 AAB67341 6 8 67 93.1 239 23 AAY06253 6 8 67 93.1 239 25 AAB67342 6 8 67 93.1 239 25 AAB67342 6 8 67 93.1 239 25 AAB67342 6 8 67 93.1 239 25 AAB06734 6	Staphylo	AAY70105	21	265	ω.	67	39
2 72 100.0 38 22 AAY72181 4 67 93.1 12 21 AAY97845 5 67 93.1 12 22 AAY97846 5 67 93.1 12 22 AAY72183 6 67 93.1 12 22 AAY72184 6 67 93.1 238 12 AAR13208 6 67 93.1 238 14 AAR45016 6 67 93.1 238 12 AAR13208 6 67 93.1 239 12 AAR13206 6 7 93.1 239 12 AAR13207 6 9 3.1 239 14 AAR45014 7 9 3.1 239 14 AAR45014 8 67 93.1 239 14 AAR45014 9 67 93.1 239 14 AAR45015 6 6 7 93.1 239 19 AAW66447 5 6 6 7 93.1 239 20 AAY06254 6 6 7 93.1 239 20 AAY06255 6 6 9 93.1 239 20 AAY06256 6 7 93.1 239 20 AAY06256 6 7 93.1 239 20 AAY06251 8 6 7 93.1 239 20 AAY06251 8 6 7 93.1 239 20 AAY06252 9 6 7 93.1 239 20 AAY06251 1 6 7 93.1 239 20 AAY06252 1 6 7 93.1 239 20 AAY06252 2 6 7 93.1 239 20 AAY06253 3 6 7 93.1 239 21 AAY06252 4 6 7 93.1 239 22 AAY06253 5 6 7 93.1 239 21 AAY06252 5 6 7 93.1 239 22 AAY06253 6 7 93.1 239 21 AAY06252 6 7 93.1 239 22 AAY06252 6 8 93.1 239 22 AAY06252 6 9 93.1 239 20 AAY06252 6 7 93.1 239 20 AAY06252 6 7 93.1 239 21 AAY06252 6 7 93.1 239 22 AAB67341 8 Staphylococcal Staphylococc		AAY70104	21	265	ω.	67	38
2 72 100.0 38 22 AAY72181 4 67 93.1 12 21 AAY97845 5 67 93.1 12 22 AAY97846 5 67 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72184 6 67 93.1 238 12 AAR13208 6 67 93.1 238 12 AAR13208 6 67 93.1 238 12 AAR13208 6 67 93.1 239 12 AAR13207 6 7 93.1 239 12 AAR13207 6 7 93.1 239 14 AAR45014 6 7 93.1 239 12 AAR13207 6 7 93.1 239 14 AAR45015 6 7 93.1 239 15 AAR13207 6 7 93.1 239 14 AAR45015 6 7 93.1 239 15 AAR13207 6 8 67 93.1 239 16 AAR45015 6 7 93.1 239 20 AAY06254 6 8 67 93.1 239 20 AAY06255 6 9 9 9 3.1 239 20 AAY06256 6 9 9 3.1 239 20 AAY06256 6 9 9 3.1 239 20 AAY06258 6 9 9 3.1 239 20 AAY06258 6 9 9 3.1 239 20 AAY06256 6 9 9 3.1 239 20 AAY06256 6 9 9 3.1 239 20 AAY06258 6 9 9 3.1 239 20 AAY06258 6 9 9 3.1 239 20 AAY06258 6 9 9 3.1 239 20 AAY06253 6 9 9 3.1 239 20 AAY06253 6 9 9 3.1 239 20 AAY06253 6 9 9 3.1 239 21 AAY00258 6 9 9 3.1 239 22 AAB67341 8 6 9 3.1 239 23 AAY06253 8 6 9 3.1 239 21 AAY00258 8 6 9 3.1 239 22 AAB67342 8 6 9 3.1 239 23 AAY06253 8 6 6 9 3.1 239 23 AAY0	Staphylococcus ent	AAW06737	18	255	ω.	67	37
2 72 100.0 38 22 AAY72181 2 67 93.1 12 21 AAY97845 3 67 93.1 12 21 AAY97846 5 67 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72184 6 67 93.1 12 22 AAY72184 6 67 93.1 238 12 AAR12208 6 67 93.1 238 14 AAR45016 6 67 93.1 238 12 AAR13208 6 67 93.1 238 12 AAR13206 6 67 93.1 239 12 AAR13206 6 7 93.1 239 12 AAR13207 7 8 93.1 239 14 AAR45014 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		AAY54465	21	240	93.1	67	36
2 72 100.0 38 22 AAY72181 2 67, 93.1 12 21 AAY97845 3 67, 93.1 12 21 AAY97846 4 67, 93.1 12 22 AAY97846 5 67 93.1 12 22 AAY72183 5 67 67 93.1 12 22 AAY72184 6 67 93.1 238 12 AAY12208 6 67 93.1 238 12 AAR12208 6 67 93.1 238 12 AAR12208 6 67 93.1 238 12 AAR12208 6 67 93.1 239 12 AAR1206 6 67 93.1 239 12 AAR13207 6 67 93.1 239 14 AAR45014 7 67 93.1 239 14 AAR45014 7 67 93.1 239 14 AAR45015 7 67 93.1 239 14 AAR45015 8 67 93.1 239 17 AAR1307 8 67 93.1 239 20 AAY06254 8 67 93.1 239 20 AAY06255 8 67 93.1 239 20 AAY06256 8 67 93.1 239 20 AAY06256 8 67 93.1 239 20 AAY06256 8 67 93.1 239 20 AAY06257 8 67 93.1 239 20 AAY06258 8 67 93.1 239 20 AAY06251 8 67 93.1 239 20 AAY06251 8 67 93.1 239 20 AAY06252 8 67 93.1 239 20 AAY06255 8 54phylococcal Staphylococcal Staphylococca	Staphylococcus aur	AAB67342	22	239	93.1	67	35
2 72 100.0 38 22 AAY72181 4 67 93.1 12 21 AAY97845 5 67 93.1 12 22 AAY97846 5 67 93.1 12 22 AAY72183 6 67 93.1 12 22 AAY72184 7 67 93.1 238 12 AAR13208 7 67 93.1 238 12 AAR13208 8 67 93.1 238 12 AAR13208 9 67 93.1 239 12 AAR13207 67 93.1 239 12 AAR13207 67 93.1 239 14 AAR45014 8 567 93.1 239 14 AAR45014 1 67 93.1 239 14 AAR45015 67 93.1 239 18 AAR45014 1 67 93.1 239 19 AAR45015 2 67 93.1 239 19 AAY06254 5 67 93.1 239 20 AAY06255 6 67 93.1 239 20 AAY06258 6 67 93.1 239 20 AAY06253 6 67 93.1 239 20 AAY06253 6 7 93.1 239 20 AAY06253 6 8 67 93.1 239 20 AAY06253 6 9 93.1 239 21 AAY06253 6 9 93.1 239 21 AAY06253 6 7 93.1 239 230 AAY06253	Staphylococcus aur	AAB67341	22	239	93.1	67	34
2 72 100.0 38 22 AAY72181 2 67 93.1 12 21 AAY97845 4 67 93.1 12 22 AAY97846 5 67 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72184 6 6 7 93.1 12 22 AAY72184 7 6 7 93.1 238 12 AAR13208 6 6 93.1 238 12 AAR13208 6 7 93.1 238 12 AAR13208 6 8 93.1 238 12 AAR13206 6 9 3.1 239 12 AAR13206 6 9 3.1 239 12 AAR13207 7 6 93.1 239 12 AAR13207 8 6 93.1 239 14 AAR45014 9 6 7 93.1 239 12 AAR13207 1 6 7 93.1 239 14 AAR45015 2 6 7 93.1 239 14 AAR45015 3 6 7 93.1 239 19 AAW64647 5 6 7 93.1 239 20 AAY06254 8 6 7 93.1 239 20 AAY06255 8 6 7 93.1 239 20 AAY06256 8 6 7 93.1 239 20 AAY06251 8 6 7 93.1 239 20 AAY06251 8 6 7 93.1 239 20 AAY06252 9 6 7 93.1 239 20 AAY06252 1 6 7 93.1 239 20 AAY06253 2 6 7 93.1 239 20 AAY06251 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		AAY70106	21	239	93.1	67	ω ω
2 72 100.0 38 22 AAY72181 2 77 100.0 38 22 AAY72181 3 67, 93.1 12 21 AAY97845 4 67, 93.1 12 21 AAY97846 5 67, 93.1 12 22 AAY72183 5 67, 93.1 12 22 AAY72184 6 67, 93.1 12 22 AAY72184 7 67 93.1 238 12 AAR13208 6 67, 93.1 238 12 AAR13208 6 67, 93.1 238 14 AAR45016 6 67, 93.1 238 22 AAB67343 6 67, 93.1 239 12 AAR13207 6 7, 93.1 239 12 AAR13207 6 7, 93.1 239 14 AAR45014 7 6 7, 93.1 239 14 AAR45015 8 6 7, 93.1 239 14 AAR45015 9 6 7, 93.1 239 14 AAR45015 9 6 7, 93.1 239 14 AAR45015 9 6 7, 93.1 239 20 AAY06254 1 6 7, 93.1 239 20 AAY06255 1 6 7, 93.1 239 20 AAY06256 1 6 7, 93.1 239 20 AAY06256 1 6 7, 93.1 239 20 AAY06256 1 7, 93.1 239 20 AAY06256 1 8 67, 93.1 239 20 AAY06256 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		AAY06253	20	239	93.1	67	32
2 72 100.0 38 22 AAY72181 2 67, 93.1 12 21 AAY97846 4 67, 93.1 12 21 AAY97846 5 67, 93.1 12 22 AAY72183 5 67, 93.1 12 22 AAY72183 5 67, 93.1 12 22 AAY72184 6 67, 93.1 12 22 AAY72184 7 67, 93.1 238 12 AAR13208 6 67, 93.1 238 14 AAR45016 8 67, 93.1 238 12 AAR13208 6 67, 93.1 239 12 AAR13206 6 67, 93.1 239 12 AAR13207 6 67, 93.1 239 12 AAR13207 6 7, 93.1 239 14 AAR45014 1 67, 93.1 239 14 AAR45015 1 67, 93.1 239 14 AAR45015 2 67, 93.1 239 14 AAR45015 3 67, 93.1 239 14 AAR45015 4 67, 93.1 239 18 AAR45015 5 67, 93.1 239 20 AAY06254 6 67, 93.1 239 20 AAY06255 6 67, 93.1 239 20 AAY06256	_	AAY06252	20	239	93.1	67	31
2 72 100.0 38 22 AAY72181 2 77 100.0 38 22 AAY72181 3 67, 93.1 12 21 AAY97845 4 67, 93.1 12 21 AAY97846 5 67 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72183 6 67 93.1 23 22 AAY72184 6 67 93.1 238 12 AAR13208 6 67 93.1 238 14 AAR45016 6 67 93.1 238 22 AAB67343 6 67 93.1 238 22 AAB67343 6 67 93.1 239 12 AAR13206 6 67 93.1 239 12 AAR13207 7 67 93.1 239 14 AAR45014 7 67 93.1 239 14 AAR45015 8 67 93.1 239 14 AAR45015 9 67 93.1 239 14 AAR45015 15 67 93.1 239 20 AAY06254 16 67 93.1 239 20 AAY06256 17 67 93.1 239 20 AAY06256 18 67 93.1 239 20 AAY06257 18 67 93.1 239 20 AAY06258 18 67 93.1 239 20 AAY06257 18 67 93.1 239 20 AAY06258	_	AAY06251	20	239	93.1	67	30
2 72 100.0 38 22 AAY72181 2 77 100.0 38 22 AAY72181 3 67, 93.1 12 21 AAY97845 4 67, 93.1 12 21 AAY97846 5 67, 93.1 12 22 AAY72183 5 67, 93.1 12 22 AAY72184 5 67, 93.1 12 22 AAY72184 6 67, 93.1 12 22 AAY72184 7 67, 93.1 238 12 AAR13208 6 67, 93.1 238 14 AAR45016 6 67, 93.1 238 22 AAR57343 6 67, 93.1 239 12 AAR13206 6 7, 93.1 239 12 AAR13206 6 7, 93.1 239 12 AAR13207 6 7, 93.1 239 14 AAR45014 6 6 7, 93.1 239 14 AAR45015 6 6 93.1 239 14 AAR45015 6 6 93.1 239 20 AAY06254 6 6 93.1 239 20 AAY06255 6 6 93.1 239 20 AAY06256 6 6 93.1 239 20 AAY06256 6 7, 93.1 239 20 AAY06257	-	AAY06258	20	239	93.1	67	29
2 72 100.0 38 22 AAY72181 2 67 93.1 12 21 AAY97845 4 67 93.1 12 21 AAY97846 5 67 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72183 6 67 93.1 12 22 AAY72184 7 67 93.1 238 12 AAR13208 7 67 93.1 238 12 AAR13208 8 67 93.1 238 14 AAR45016 8 67 93.1 238 22 AAR13206 9 67 93.1 238 22 AAR13206 9 67 93.1 239 12 AAR13207 167 93.1 239 12 AAR13207 167 93.1 239 14 AAR45014 167 93.1 239 17 AAR45014 17 67 93.1 239 18 AAR45015 18 67 93.1 239 18 AAR45015 19 67 93.1 239 18 AAR45015 10 67 93.1 239 18 AAR45015 11 67 93.1 239 19 AAW64647 12 67 93.1 239 20 AAY06256 17 93.1 239 20 AAY06255 18 54phylococcal Staphylococcal	_	AAY06257	20	239	ω.	67	28
2 72 100.0 38 22 AAY72181 2 67, 93.1 12 21 AAY97845 4 67, 93.1 12 21 AAY97846 5 67, 93.1 12 22 AAY72183 5 67, 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72184 6 67 93.1 23 12 AAR45016 6 67 93.1 238 14 AAR45016 6 67 93.1 238 22 AAAR45016 6 67 93.1 238 22 AAAR45016 6 67 93.1 238 22 AAAR45016 6 67 93.1 239 12 AAR13206 6 67 93.1 239 12 AAR13206 6 7 93.1 239 12 AAR13207 7 6 7 93.1 239 12 AAR13206 8 6 7 93.1 239 12 AAR13206 9 6 7 93.1 239 12 AAR13206 1 6 7 93.1 239 13 AAR45014 2 6 7 93.1 239 14 AAR45014 3 6 7 93.1 239 14 AAR45015 5 6 7 93.1 239 19 AAW64647 5 6 7 93.1 239 20 AAY06254 5 6 7 93.1 239 20 AAY06254 5 6 7 93.1 239 20 AAY06255		AAY06256	20	239	93.1	67	27
2 72 100.0 38 22 AAY72181 2 1 AAY97845 4 67 93.1 12 21 AAY97846 5 67 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72184 6 6 7 93.1 12 22 AAY72184 6 6 9 3.1 23 12 AAR3208 6 6 9 3.1 238 12 AAR3208 6 6 9 3.1 238 12 AAR3208 6 6 9 3.1 238 12 AAR3206 6 6 9 3.1 238 22 AAB67343 6 6 9 3.1 239 12 AAR3206 7 6 9 3.1 239 12 AAR3206 8 6 9 3.1 239 12 AAR3206 9 6 9 3.1 239 12 AAR3206 9 6 9 3.1 239 12 AAR3206 1 6 9 3.1 239 12 AAR3206 2 6 9 3.1 239 12 AAR3206 2 5 5 6 9 3.1 239 14 AAR45014 3 6 7 9 3.1 239 14 AAR45015 3 6 7 9 3.1 239 14 AAR45015 5 6 7 9 3.1 239 15 AAR64647 5 5 6 7 9 3.1 239 17 AAR64647 5 5 6 7 9 3.1 239 20 AAY06254		AAY06255	20	239	93.1		26
2 72 100.0 38 22 AAY72181 2 67 93.1 12 21 AAY97845 4 67 93.1 12 21 AAY97846 5 67 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72184 6 67 93.1 12 22 AAY72184 6 67 93.1 22 AAY72184 6 67 93.1 23 12 AAR45016 7 67 93.1 238 14 AAR45016 8 67 93.1 238 24 AAR50343 6 67 93.1 238 25 AAR50344 6 67 93.1 238 25 AAR5034 6 67 93.1 238 27 AAR5034 6 67 93.1 239 12 AAR3207 6 7 93.1 239 12 AAR3207 6 7 93.1 239 14 AAR45015 6 7 93.1 239 15 AAR65014 6 7 93.1 239 14 AAR45015	1	AAY06254	20	239	93.	67	S
2 72 100.0 38 22 AAY72181 2 67, 93.1 12 21 AAY97845 4 67, 93.1 12 21 AAY97846 5 767, 93.1 12 22 AAY72183 5 767 93.1 12 22 AAY72183 6 767 93.1 12 22 AAY72184 6 767 93.1 12 22 AAY72184 6 767 93.1 23 12 AAR3208 6 767 93.1 238 12 AAR345016 7 7 8 93.1 238 14 AAR345016 8 7 93.1 238 22 AAB87343 9 7 93.1 239 12 AAR33206 9 7 93.1 239 12 AAR33206 9 7 93.1 239 12 AAR345014 9 7 93.1 239 12 AAR345014 9 7 93.1 239 14 AAR345014 9 8 7 93.1 239 14 AAR345015 9 8 7 93.1 239 14 AAR345015 9 8 7 93.1 239 14 AAR345015	~	AAW64647	19	239	93.	67	4
2 72 100.0 38 22 AAY72181 2 1 72 100.0 38 22 AAY72181 3 67, 93.1 12 21 AAY97845 4 67, 93.1 12 21 AAY97846 5 567 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72184 6 67 93.1 12 22 AAY72184 6 67 93.1 238 12 AAR13208 8 67 93.1 238 12 AAR3206 8 67 93.1 238 14 AAR45016 8 67 93.1 238 12 AAR3206 8 67 93.1 238 22 AAB67343 9 67 93.1 238 22 AAR3206 9 67 93.1 238 22 AAR3206 9 67 93.1 238 32 AAR3206 9 67 93.1 238 32 AAR3206 9 67 93.1 239 12 AAR3206 Staphylococcc 1 67 93.1 239 12 AAR43207 2 67 93.1 239 14 AAR45014	_	AAR45015	14	239	93.	67	ω
2 72 100.0 38 22 AAY72181 3 67 93.1 12 21 AAY97845 4 67 93.1 12 21 AAY97846 5 67 93.1 12 22 AAY72183 5 67 93.1 12 22 AAY72184 6 67 93.1 12 22 AAY72184 6 67 93.1 12 22 AAY72184 7 67 93.1 238 12 AAR313208 8 67 93.1 238 12 AAR313208 8 67 93.1 238 12 AAR313206 9 67 93.1 238 22 AAB57343 6 67 93.1 238 32 AAR313206 6 67 93.1 238 32 AAR313207 6 67 93.1 239 12 AAR313207 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		AAR45014 .	14	239	93.	67	Ν
2 72 100.0 38 22 AAY72181 Peptide #6348 3 67, 93.1 12 21 AAY97845 Staphylococcu 4 67, 93.1 12 22 AAY72183 Peptide from 5 767 93.1 12 22 AAY72184 Peptide from 6 767 93.1 12 22 AAY72184 Peptide from 7 67 93.1 23 12 AAR13208 Staphylococcu 9 67 93.1 238 12 AAR3208 Staphylococcu 9 67 93.1 238 12 AAR13206 Staphylococcu 9 67 93.1 238 22 AAB67343 Staphylococcu		AAR13207	12	239	93.	67	1
2 72 100.0 38 22 AAY72181 Peptide #6348 3 67, 93.1 12 21 AAY97845 Staphylococccu 4 67, 93.1 12 22 AAY72183 Peptide from 5 7 93.1 12 22 AAY72183 Peptide from 6 7 93.1 12 22 AAY72184 Peptide from 6 7 93.1 23 AAR45016 Staphylococccu 8 6 7 93.1 238 12 AAR45016 Staphylococccu 9 67 93.1 238 22 AAB67343 Staphylococccu		AAR13206	12	239	93.	67	0
2 72 100.0 38 22 AAY72181 Peptide #6348 3 67 93.1 12 21 AAY97845 Staphylococccu 4 67 93.1 12 21 AAY97846 Staphylococccu 5 67 93.1 12 22 AAY72183 Peptide from 6 67 93.1 12 22 AAY72184 Peptide from 7 67 93.1 238 12 AAR13208 Staphylococccs 8 67 93.1 238 14 AAR45016 Staphylococccs		AAB67343	22	238	93.	67	9
2 72 100.0 38 22 AAY72181 Peptide #6348 3 67 93.1 12 21 AAY97845 Staphylococcu 4 67 93.1 12 21 AAY72183 Peptide from 5 93.1 12 22 AAY72184 Peptide from 6 67 93.1 12 22 AAY72184 Peptide from 6 67 93.1 23 AAY13208 Staphylococcus		AAR45016	14	238	93.	67	8
2 72 100.0 38 22 AAY72181 Peptide #6348 3 67 93.1 12 21 AAY97845 Staphylococcu 4 67 93.1 12 21 AAY97846 Staphylococcu 5 67 93.1 12 22 AAY72184 Peptide from 6 67 93.1 12 22 AAY72184 Peptide from	300008	AAR13208	12	238	93.	67	7
2 72 100.0 38 22 AAY72181 Peptide #6348 3 67, 93.1 12 21 AAY97845 Staphylococcu 4 67, 93.1 12 21 AAY97846 Staphylococcu 5 ,67 93.1 12 22 AAY72183 Peptide from	from	218	22	12	93.	767	σ
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2 72 100.0 38 22 AAY72181 Peptide #6348, 3 67; 93.1 12 21 AAY97845 Staphylococcus		784	21	12	93.	<i>6</i> 7,	4
2 72 100.0 38 22 AAY72181 Peptide #6348,		784	21		93.	67 ;	w
	#6348	72	22	38	100.	72	Ν

ALIGNMENTS

Peptide #1 for reducing symptoms of toxic shock syndrome

22-DEC-1998 (first entry)

AAW72422;

AAW72422 standard; peptide; 12

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Synthetic.
Staphylococcus sp.
Streptococcus sp.
                                                                                                                                                                                                Toxic shock syndrome; immunogenic response; bacterial infection; staphylococcal enterotoxin; streptococcal pyrogenic toxin; antibody; autoimmune disease.
New peptides that generate antibodies against staphylococcal and streptococcal toxins - used to diagnose, treat or prevent toxic
                             WPI; 1998-568335/48.
                                               Bannan JD,
                                                                                    07-APR-1997;
                                                                                                     01-APR-1998;
                                                                                                                        15-OCT-1998
                                                                                                                                           WO9845325-A1
                                                                (UYRQ ) UNIV ROCKEFELLER.
                                                Zabriskie JB;
                                                                                    97US-0838413
                                                                                                     98WO-US06663
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shock and autoimmune diseases

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Query Match
Best Local Similarity
Watches 12; Conserv
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                             Claim 4;
                                                                  Peptides useful for syndrome and septic
                                                                                                                WPI; 2000-303782/26
                                                                                                                                                                                                   07-OCT-1998;
18-JUN-1999;
                                                                                                                                                                                                                                                                                                                             Synthetic.
Staphylococcus aureus
Streptococcus sp. 'Gro
                                                                                                                                                                       (UYRQ ) UNIV ROCKEFELLER
                                                                                                                                                                                                                                             24-SEP-1999;
                                                                                                                                                                                                                                                                        13-APR-2000
                                                                                                                                                                                                                                                                                                    WO200020598-A1
                                                                                                                                                                                                                                                                                                                                                                                                 Pyrogenic exotoxin; enterotoxin; streptococcal infection; staphylococcal infection; septic shock; toxic shock; vacc
                                                                                                                                                                                                                                                                                                                                                                                                                                        Staphylococcal/streptococcal pyrogenic toxin-derived peptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29 - AUG - 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY97838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY97838 standard; peptide; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes peptides having consensus sequences #1 or #2, optionally as part of a larger molecule of size at least 6-8 kD where consensus sequence #1 and #2 are: X25X26YG6X1TXXX34XN #1, KX6X7X8X9X10X11X12X13DX14X15X16RX17X18X27X19X20X21X22X23X24Y #2, where
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 cmyggvtehegn 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #2, optionally as p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
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                          Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12
                                                                                                                                           Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                          88; 115pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ā
                                                                                                                                                                                                  98US-0168303.
99US-0335581.
                                                                                                                                                                                                                                             99WO-US22180
                                                                                                                                                                                                                                                                                                                             'Group A'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69pp; English
                                                                  preventing and reducing the symptoms of toxic shock shock from staphylococcal and streptococcal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                           Zabriskie JB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 72;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.5e-06;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                 toxic shock; vaccine,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                           6343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
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The invention relates to novel peptides (AAY97838-Y97843) comprising

Mononuclear cell; blastogenesis; inhibitor; HIV; replication; staphylococcal enterotoxin; human immunodeficiency virus; T co

T cell;

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AAY72176
ID AAY7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   staphylococcal enterotoxin or streptococcal exotoxin and both the peptides and antibodies can be used in diagnostic assays to aid in the cidagnosis of disease related to the presence of bacterial toxins. Nucleic acids encoding a peptide of the invention can be used for the production of the peptides for diagnostic reagents, as vaccines and for therapies for pyrogenic exotoxin related diseases. Vectors expressing high levels of the peptides can be used in immunotherapy and immunoprophylaxis when expressed in humans. The antibodies are used for passive immunisation therapy to prevent or increase resistance to toxic shock syndrome or expressed in humans. The antibodies are used for passive immunisation therapy to prevent or increase resistance to toxic shock syndrome or expressed in humans. The antibodies are used for passive immunisation the presence of staphylococcal or streptococcal pyrogenic toxins. The amino acid sequences of the peptides are sufficiently common that they can be used for eliciting antibodies which are cross reactive with toxins derived from various bacteria. Sequences AAY97838-y978343 represent the synthetic peptides based on consensus consensus regions 1 and 2 of Staphylococcus aureus and Group A streptococcal pyrogenic toxins.

These peptides can be administered to a mammal to raise serum antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 12
                                                                                              Peptide #6343, derived from streptococcal and staphylococcal toxins.
                                                                                                                                                                                                                                                                                                                                      AAY72176 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               share similar biological activities. They stimulate CD4+, CD8+ and gamma-delta+ T-cells by binding the beta-chain variable region (V-beta) elements on the lateral face of the T-cell receptor (TCR) while simultaneously binding the lateral face of the class II major histocompatibility complex (MHC) of antigen presenting cells. This causes aberrant proliferation of T-cells, which stimulates other components of the immune system, causing injury to the host. The peptides are used to prevent, treat or protect against toxic shock and septic shock resulting from bacterial infections in mammals, particularly humans. The peptides are used for inducing serum antibodies that bind at least one
                                                                                                                                                                                    24-APR-2001
                                                                                                                                                                                                                                                               AAY72176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        X9-X10-X11-X12-X13-D-X14-X15-X16-R-X17-X18-X27-X19-X20-X21-X22-X23-X24-Y (AAYS97864), where: X1, X8, X13 and X24 are each independently selected from L, I and V; X2,X4, X5, X6, X7, X9, X10, X11, X12, X14, X15, X16, X17, X18, X19, X20, X21, X22 and X23 are each independently selected from the group consisting of any amino acid; the group consisting of any amino acid; X3, X5 and X26 are each independently selected from the group consisting X3, X5 and X26 are each independently selected from the group consisting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               X27 is either L or Y.

The invention also relates to serum antibodies induced by the peptides which provide protection against, or reduce the severity of toxic shocl and septic shock caused by the staphylococcal and streptococcal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (regions 1 and 2) or computations are streptococcal pyrogenic toxins: Consensus region 1a (a preferred consensus region 1) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N (AAV47863) and consensus region 2a (a preferred consensus region 2) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N (AAV47863) and consensus region 2a (a preferred consensus region 2) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N (AAV47863) and consensus region 2a (a preferred consensus region 2) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N (AAV47863) and consensus region 2a (a preferred consensus region 2) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N (AAV47863) and consensus region 2a (a preferred consensus region 2) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N (AAV47863) and consensus region 2a (a preferred consensus region 2) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N (AAV47863) and consensus region 2a (a preferred consensus region 2a (a prefe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             x3, x5 and X26 are equi inversion acid; of any amino acid and of no amino acid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for protection against or amelioration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the sequence K-X6-X7-X8-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         consensus amino acid sequence derived from two conserved regions (regions 1 and 2) of Staphylococcus aureus enterotoxins and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CMYGGVTEHEGN 12
                                                                                                                                                                                                                                                                                                                                                                                                                ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cmyggvtehegn 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                          12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 72;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of toxic or septic shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 12;
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Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    streptococcal pyrogenic exotoxin.
The peptide, nucleic acid encoding the peptide and antibody (Ab) produced against the peptide are useful for inhibiting blastogenesis of mononuclear cells (eg. T cells) in the presence of human immunodeficiency virus (HIV), inhibiting HIV replication and protecting a mammal against the deleterious effects of HIV. The peptide is also used to ameliorate the effects of autoimmune diseases associated with the presence of HIV. The Ab is used for passively immunising a mammal against the deleterious effects of HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Providing protection against, and reducing the severity of, human immunodeficiency virus infections and associated deleterious effects, using peptides from homologous sequences of staphylococcal and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Streptococcus sp. Staphylococcus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 5; Page 38; 76pp; English
01-APR-1998;
                                                                                           W09845325-A1
                                                                                                                                           Streptococcus
                                                                                                                                                                  Staphylococcus
                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                         autoimmune
                                                                                                                                                                                                                                                             Toxic shock syndrome; immunogenic response; bacterial infection; staphylococcal enterotoxin; streptococcal pyrogenic toxin; antibody;
                                                                                                                                                                                                                                                                                                                                                                                          22-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW72424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAW72424 standard; peptide; 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence is peptide #6343, derived from region 1 of the homologous sequences of staphylococcal enterotoxin and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    streptococcal toxins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-080820/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Visvanathan K, Zabriskie JB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYRQ ) UNIV ROCKEFELLER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-JUN-1999;
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                                             15-OCT-1998
                                                                                                                                                                                                                                                                                                                                       Peptide #3 for reducing symptoms of toxic shock syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
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12; Conserv
                                                                                                                                                                                                                                            disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12 AA;
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                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                           sp.
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98WO-US06663.
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Pred. No. 3.5e-06;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                              Synthetic.
Staphylococcus aureus.
Streptococcus sp. 'Gro
                                                                                                                                                                                                                                                                                                       Staphylococcal/streptococcal pyrogenic toxin-derived peptide,
                                           07-OCT-1998;
18-JUN-1999;
                                                                                                                                                   WO200020598-A1
                                                                                                                                                                                                                                                          Pyrogenic exotoxin; enterotoxin; staphylococcal infection; septic
                                                                                                                                                                                                                                                                                                                                                                       AAY97840;
                                                                                                                                                                                                                                                                                                                                                                                                    AAY97840 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 4; Page 53; 69pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New peptides that generate antibodies against staphylococcal and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYRQ ) UNIV ROCKEFELLER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-APR-1997;
            (UYRQ ) UNIV ROCKEFELLER
                                                                                       24-SEP-1999;
                                                                                                                      13-APR-2000
                                                                                                                                                                                                                                                                                                                                      29-AUG-2000 (first entry)
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12; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ccal toxins - used to diagnose, treat or prevent toxic autoimmune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zabriskie JB;
                                         980S-0168303
990S-0335581
                                                                                       99WO-US22180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-0838413.
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                                                                                                                                                                                 'Group A'.
                                                                                                                                                                                                                                                                                                                                                                                                      14 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 72;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                            streptococcal infection; shock; toxic shock; vacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 19;
. 4.2e-06;
thes 0;
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                                                                                                                                                                                                                                                                                                                                                                               which provide protection against, or reduce the severity of toxic shock caused by the staphylococcal and streptococcal and septic shock caused by the staphylococcal and streptococcal and control of toxic shock caused by the staphylococcal and streptococcal and the project toxins. The pyrogenic exotoxins of Group A streptococcal and the enterotoxins of Staphylococcus aureus (which are also pyrogenic exotoxins) constitute a family of structurally related toxins which constitutes on the lateral face of the T-cell receptor (TCR) while constitutes on the lateral face of the T-cell receptor (TCR) while constituted and subtility complex (MHC) of antigen presenting cells. This causes aberrant proliferation of T-cells, which stimulates other components of the immune system, causing injury to the host. The peptides are used to prevent, treat or protect against toxic shock and septic shock resulting collar interactions in mammals, particularly humans. The peptides for diagnostic shock and septic shock resulting collar interaction of streptococcal exotoxin and both the constant of diagnostic respective constant and both the collar phylococcal exotoxin related to the presence of bacterial toxins. Nucleic acids encoding a peptide of the invention can be used for the production of the peptides for diagnostic respects. Vectors expressing high levels of the peptides can be used in immunotherapy and immunoprophylaxis when the prosessed in humans. The antibodies are used for passive immunisation can be used for entitient of the peptides are softened to the special toxins. The constitution of the peptides for diagnostic respectate to toxic shock syndrome or septic shock syndrome or consensus consensus regions 1 and 2 of the personal diagnostic respectations 1 and 2 of the production sased on consensus consensus regions 1 and 2 of the syndrome of the syndrome of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to novel peptides (AAY97838-Y97843) comprising a consensus amino acid sequence derived from two conserved regions (regions 1 and 2) of Staphylococcus aureus enterotoxins and streptococcal pyrogenic toxins. Consensus region 1a (a preferred consensus region 1) has the sequence x25-x26-y-G-G-X1-T-X2-X3-X4-X5-N (AAY97863) and consensus region 2a (a preferred consensus region 2) has the sequence x76-x7-X8-X1-X1-X12-X13-D-X14-X15-X16-R-X17-X18-X27-X19-X20-X21-X22-X23-X24-y (AAY97864), where: X1, X8, X13 and X24 are each independently selected from L, I and V; X2,X4, X5, X6, X7, X9, X10, X11, X12, X14, X15, X16, X17, X18, X11, X12, X14, X15, X16, X17, X18, X13, X19, X21, X22 and X23 are each independently selected from the group consisting of any amino acid.

CC X1, X18, X19, X20, X21, X22 and X23 are each independently selected from the group consisting of any amino acid.

CC X3, X5 and X26 are each independently selected from the group consisting of any amino acid and of no amino acid.

CC The invention also relates to serum antibodies induced by the peptides which novide and referring arginst or reduce the security of the peptides.
                                                                                                           Matches
                                                                                                                                                                                                                                                                                                             synthetic peptides based on consensus consensus regions 1 and 2 of Staphylococcus aureus and Group A streptococcal pyrogenic toxins. These peptides can be administered to a mammal to raise serum antibodies
                                                                                                                                                                                                                                          Sequence
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                                                                                                                                                                                                                                                                                         for protection against or amelioration of toxic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
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                                                                                                         Local Similarity
nes 12; Conserv
                                                 1 CMYGGVTEHEGN 12
cmyggvtehegn 12
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                                                                                                                                                                                                                                          14
                                                                                                   100.0%; ilarity 100.0%; Conservative 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            115pp; English
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                                                                                                                                 Score 72;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and reducing the symptoms of toxic shock staphylococcal and streptococcal
                                                                                                         Mismatches
                                                                                                                            ; DB 21;
. 4.2e-06;
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                                                                                                                                                       Length 14;
                                                                                                                                                                                                                                                                                         septic shock
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                                                                                                   Gaps
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RESULT

Toxic shock syndrome; immunogenic response; bacterial infection; staphylococcal enterotoxin; streptococcal pyrogenic toxin; antib

toxin; antibody;

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AAW72426
ID AAW7
XX
AC AAW7
XX
AC AAW7
XX
AC Pept
XX
DT 22-I
XX
DE Pept
XX
KW Toxi
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ID AAY7
XX
AC AAY7
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AC AAY7
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AC AAY7
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DY 24-A
XX
Pept
XX
Mono
XW
Stap
PN W020
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I6-J
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I16-J
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CC The
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                                                                                                                                                                                                                                                                                                                                         RESULT
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Best Local S
Matches 12
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The peptide, nucleic acid encoding the peptide and antibody (Ab) produced against the peptide are useful for inhibiting blastogenesis of mononuclear cells (eg. T cells) in the presence of human immunodeficiency virus (HIV), inhibiting HIV replication and protecting a mammal against the deleterious effects of HIV. The peptide is also used to ameliorate the effects of autoimmune diseases associated with the presence of HIV. The Ab is used for passively immunising a mammal against the deleterious effects of HIV.
                                                                                     Peptide #5 for reducing symptoms of toxic shock syndrome
                                                                                                                                                                                                                    AAW72426;
                                                                                                                                                        22-DEC-1998
                                                                                                                                                                                                                                                                             AAW72426 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence is peptide #6344, a cross-linked polymer derived from the homologous sequences of staphylococcal enterotoxin and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 5; Page 38; 76pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               streptococcal toxins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Providing protection against, and reducing the severity of, human immunodeficiency virus infections and associated deleterious effects, using peptides from homologous sequences of staphylococcal and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYRQ ) UNIV ROCKEFELLER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide #6344,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-APR-2001
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12; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zabriskie JB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; ;
100.0%; ;
tive 0;
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                                                                                                                                                                                                                                                                                36
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 72;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 22;
. 4.2e-06;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 14;
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autoimmune disease.

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RESULT
AAX9784
ID AA
ID AA
AC AA
XX 29
DT 29
DT 29
CKW St
XX St
XX SS
SS
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                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              X1, X8, X13 and X24 = L, I or V; X3, X25 and X26 = any amino acid (aa) or are absent; X27 = L or Y; all other X may be any aa. The peptides can be used to generate serum antibodies (Ab) that bind at least one staphylococcal enterotoxin (SE) or streptococcal endotoxin (SPE). Ab are used: (1) for diagnostic detection of SPEA or SEA, SEB and SED, in usual immunoassays; (11) to inhibit blastogenesis of human mononuclear cells in presence of these toxins (i.e. to protect against or alleviate toxic shock or autoimmune disease associated with bacterial infections); and (iii) for passive immunisation against effects of the toxins. The peptides generate Ab that are cross-reactive with toxins from a variety of bacteria. The present sequence represents a specifically claimed example of a near the oresent sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention describes peptides having consensus sequences or #2, optionally as part of a larger molecule of size at least 6-8 where consensus sequence #1 and #2 are: x25x26Y63X1TX2X3X4X5N #1, KX6X7X8X9X10X11X12X13DX14X15X16RX17X18X27X19X20X21X22X23X24Y #2, whe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New peptides that generate antibodies against staphylococcal and streptococcal toxins - used to diagnose, treat or prevent toxic shock and autoimmune diseases
            Streptococcus
                             Synthetic. Staphylococcus aureus.
                                                                                        Pyrogenic exotoxin; enterotoxin; streptococcal infection; staphylococcal infection; septic shock; toxic shock; vaccine
                                                                                                                                  Staphylococcal/streptococcal pyrogenic toxin-derived peptide, 6347
                                                                                                                                                                   29-AUG-2000
                                                                                                                                                                                               AAY97842;
                                                                                                                                                                                                                            AAY97842 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-APR-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Streptococcus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      example of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UYRQ ) UNIV ROCKEFELLER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Staphylococcus sp.
                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                  1 CMYGGVTEHEGN 12
                                                                                                                                                                                                                                                          œ
                                                                                                                                                                                                                                                                                                      cmyggvtehegn 12
                                                                                                                                                                                                                                                                                                                                                              l Similarity
12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                          36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a peptide
                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zabriskie JB;
                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                          ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               54; 69pp; English
               sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97US-0838413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98WO-US06663
               'Group A'
                                                                                                                                                                                                                            peptide;
                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of the present invention.
                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                              Score 72;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                            1.2e-05;
                                                                                                                                                                                                                                                                                                                                                                                              DB 19;
                                                                                                                                                                                                                                                                                                                                                                                           Length 36;
                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        where
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    £ #
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CC exotoxins) constitute a family of structurally related toxins which CC share similar biological activities. They stimulate CD4+, CD8+ and CC gamma-delta+ T-cells by binding the beta-chain variable region (V-beta) CC elements on the lateral face of the T-cell receptor (TCR) while CC simultaneously binding the lateral face of the class II major CC histocompatibility complex (MHC) of antigen presenting cells. This causes CC aberrant proliferation of T-cells, which stimulates other components of the immune system, causing injury to the host. The peptides are used to prevent, treat or protect against toxic shock and septic shock resulting CC from bacterial infections in mammals, particularly humans. The peptides are used for inducing serum antibodies that bind at least one components of the peptides and antibodies can be used in diagnostic assays to aid in the CC diagnosis of disease related to the presence of bacterial toxins. Nucleic acids encoding a peptide of the invention can be used for the production of the peptides for diagnostic reagents, as vaccines and for therapies for pyrogenic exotoxin related diseases. Vectors expressing high levels cof the peptides can be used in immunotherapy and immunoprophylaxis when ceptic shock and to ameliorate the effects of conditions associated with the presence of staphylococcal or streptococcal pyrogenic toxins. The components of the peptides are used for passive immunisation can be used from various bacteria. Sequences AAV97838-Y978343 represent the they component that they can be used from various bacteria. Sequences AAV97838-Y978343 represent the contributions of the prosessing of the peptides which are cross-reactive with toxins contensus regions 1 and 2 of the sequences of the peptides which are cross-reactive with toxins contensus regions 1 and 2 of the sequences of the peptides which are cross-reactive with toxins contensus regions 1 and 2 of the sequences of the peptides which are cross-reactive with toxins contensus regions 1 and 2 of the provence of the conten
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to novel peptides (AAY97838-Y97843) comprising a consensus amino acid sequence derived from two conserved regions (regions 1 and 2) of Staphyllococcal streptococcal pyrogenic toxins. Consensus region 1a (a preferred consensus region 1) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and septic shock caused by the staphylococcal and streptococcal pyrogenic toxins. The pyrogenic exotoxins of Group A streptococci and the enterotoxins of Staphylococcus aureus (which are also pyrogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (AAY97864), where: X1, X8, X13 and X24 are each independently selected from L, I and V; X2, X4, X5, X6, X7, X9, X10, X11, X12, X14, X15, X16, X17, X18, X19, X20, X21, X22 and X23 are each independently selected from the group consisting of any amino acid; X3, X5 and X26 are each independently selected from the group consisting X3, X5 and X26 are each independently selected from the group consisting X3, X5 and X26 are each independently selected from the group consisting X3, X5 and X26 are each independently selected from the group consisting X3, X5 and X26 are each independently selected from the group consisting X3, X5 and X26 are each independently selected from the group consisting X3, X5 and X26 are each independently selected from the group consisting X3, X5 and X26 are each independently selected from the group consisting X3, X5 and X26 are each independently selected from the group consisting X3, X5 and X26 are each independently selected from X4.
                                                                                       synthetic peptides based on consensus consensus regions 1 and 2 of Staphylococcus aureus and Group A streptococcal pyrogenic toxins. These peptides can be administered to a mammal to raise serum antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 x27 is either L or Y.

The invention also relates to serum antibodies induced by the peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 4; Page 88; 115pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptides useful for preventing syndrome and septic shock from infections -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYRQ ) UNIV ROCKEFELLER.
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18-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          which provide protection against, or reduce the severity of toxic shock
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 x9-x10-x11-x12-x13-D-x14-x15-x16-R-x17-x18-x27-x19-x20-x21-x22-x23-x24-y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the sequence K-X6-X7-X8-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              infections
                                                          tor protection against or amelioration of toxic or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (AAY97863) and consensus region 2a (a preferred consensus region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-303782/26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-0168303.
99US-0335581.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JB;
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Sequence

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RESULT
AAY72180
ID AAY7
XX AAY7
XX AAY7
XX Pept
XX Pept
XX Pept
XX Pept
XX Pept
XX Wool
KW Stall
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KW Stall
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XX WOOl
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Best Local S
Matches 12
                                                                                                                                         Query Match
Best Local
                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                     The peptide, nucleic acid encoding the peptide and antibody (Ab) produced against the peptide are useful for inhibiting blastogenesis of mononuclear cells (eg. T cells) in the presence of human immunodeficiency virus (HIV), inhibiting HIV replication and protecting a mammal against the deleterious effects of HIV. The peptide is also used to ameliorate the effects of autoimmune diseases associated with the presence of HIV. The Ab is used for passively immunising a mammal against the deleterious
                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                   The Ab is used effects of HIV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence is peptide #6347, derived from the homologous sequences of staphylococcal enterotoxin and streptococcal pyrogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 5; Page 38; 76pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      streptococcal toxins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Providing protection against, and reducing the severity of, human immunodeficiency virus infections and associated deleterious effects, using peptides from homologous sequences of staphylococcal and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Streptococcus sp. Staphylococcus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mononuclear cell; blastogenesis; inhibitor; HIV; replication; there staphylococcal enterotoxin; human immunodeficiency virus; T cell; streptococcal pyrogenic exotoxin; autoimmune disease; immunisation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY72180 standard; peptide; 36 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-JUN-2000; 2000WO-US16680
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYRQ ) UNIV ROCKEFELLER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide #6347, derived from streptococcal and staphylococcal toxins
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ľ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                          CMYGGVTEHEGN 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CMYGGVTEHEGN 12
cmyggvtehegn 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-080820/09
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                                                                                                               12;
                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                            36
                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zabriskie JB
                                                                                                                                         100.0%;
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                                                                                                            0;
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                                                                                                            Score 72; DB 22;
Pred. No. 1.2e-05;
; Mismatches 0;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
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1.2e-05;
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                                                                                                                                                                 Length 36;
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                                                                                                               Indels
                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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                                                                                                            Gaps
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                                                                                                            0;
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RESULT

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RESULT 1
AAY97843
ID AAY9
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AC AAY9
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AC AAY9
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AC 29-A
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                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                The present invention describes peptides having consensus sequences #1 or #2, optionally as part of a larger molecule of size at least 6-8 kD. Where consensus sequence #1 and #2 are: x25x26YGGXITX2X3X44X5N #1, KX6X7X8X9X10XIIX12X13DX14X15X16RX17X18X27X19X20X2IX22X2X24Y #2, where x1, x8, x13 and x24 = L, I or V; x3, x25 and x26 = any amino acid (aa) or are absent; x27 = L or Y; all other x may be any aa. The peptides can be used to generate serum antibodies (Ab) that bind at least one staphylococcal enterotoxin (SB) or streptococcal endotoxin (SPB). Ab are used: (1) for diagnostic detection of SPEA or SEA, SEB and SED, in usual immunoassays; (ii) to inhibit bastogeness of human mononuclear cells in presence of these toxins (i.e. to protect against or alleviate toxic shock or autoimmune disease associated with bacterial infections); and (iii) for passive immunisation against effects of the toxins. The
   29-AUG-2000
                                                                                                                                                                                                                                                                                                      peptides generate Ab that are cross-reactive with toxins from a variety of bacteria. The present sequence represents a specifically claimed example of a peptide of the present invention.
                               AAY97843;
                                                           AAY97843 standard;
                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 4; Page 54; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               shock and autoimmune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New peptides that generate antibodies against staphylococcal and streptococcal toxins - used to diagnose, treat or prevent toxic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Toxic shock syndrome; immune staphylococcal enterotoxin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW72427 standard; peptide; 38 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bannan JD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-APR-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Staphylococcus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide #6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYRQ ) UNIV ROCKEFELLER.
                                                                                          11
                                                                                                                                                    1 CMYGGVTEHEGN 12
                                                                                                                                     cmyggvtehegn 12
                                                                                                                                                                                                12;
                                                                                                                                                                                                                                                                           38 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for reducing symptoms of toxic shock syndrome
                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zabriskie JB;
 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97US-0838413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-US06663.
                                                           peptide;
                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunogenic response; bacterial infection;
coxin; streptococcal pyrogenic toxin; antib
                                                             38
                                                                                                                                                                                                0;
                                                                                                                                                                                                                Score 72;
Pred. No.
                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                1.2e-05;
                                                                                                                                                                                                                               DB 19;
                                                                                                                                                                                                  0,
                                                                                                                                                                                                                              Length 38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antibody;
                                                                                                                                                                                                  0;
                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                  0;
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CC and septic shock caused by the staphylococcal and streptococcal CC pyrogenic toxins. The pyrogenic exotoxins of Group A streptococcal CC exotoxins) constitute a family of structurally related toxins which CC exotoxins) constitute a family of structurally related toxins which CC exotoxins) constitute a family of structurally related toxins which CC share similar biological activities. They stimulate CD4+, CD8+ and CC gamma-delta+ T-cells by binding the beta-chain variable region (V-beta) CC elements on the lateral face of the T-cell receptor (TCR) while CC simultaneously binding the lateral face of the class II major the instocompatibility complex (MHC) of antigen presenting cells. This causes aberrant proliferation of T-cells, which stimulates other components of the immune system, causing injury to the host. The peptides are used to prevent, treat or protect against toxic shock and septic shock resulting CC from bacterial infections in mammals, particularly humans. The peptides can be used for inducing serum antibodies that bind at least one staphylococcal enterotoxin or streptococcal exotoxin and both the CC peptides and antibodies can be used in diagnostic assays to aid in the CC diagnosis of disease related to the presence of bacterial toxins. Nucleic acids encoding a peptide of the invention can be used for the production of the peptides for diagnostic reagents, as vaccines and for therapies CC for pyrogenic exotoxin related diseases. Vectors expressing high levels of the peptides can be used in immunotherapy and immunoprophylaxis when expressed in humans. The antibodies are used for passive immunisation therapoles for the peptides can be used in the conditions associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of any amino acid and of no amino acid; X27 is either L or Y.

The invention also relates to serum antibodies induced by the peptides which provide protection against, or reduce the severity of toxic shoc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (AAY97863) and consensus region 2a (a preferred consensus region 2) has the sequence K-X6-X7-X8-
X9-X10-X11-X13-D-X14-X15-X16-R-X17-X18-X27-X19-X20-X21-X22-X23-X24-Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to novel peptides (AAY97838-Y97843) comprising a consensus amino acid sequence derived from two conserved regions (regions 1 and 2) of Staphylococcus aureus enterotoxins and streptococcal pyrogenic toxins. Consensus region 1a (a preferred consensus region 1) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N (AAY97863) and consensus region 2a (a preferred consensus region 2) has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 4; Page 88; 115pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptides useful for preventing syndrome and septic shock from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Staphylococcus aureus.
Staphylococcus sp. 'Group A'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (AAY97864), where: x1, x8, x13 and x24 are each independently selected from L, I and V; x2, x4, x5, x6, x7, x9, x10, x11, x12, x14, x15, x16, x17, x18, x19, x20, x21, x22 and x23 are each independently selected from the group consisting of any amino acid; x3, x5 and x26 are each independently selected from the group consisting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-OCT-1998;
18-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYRQ ) UNIV ROCKEFELLER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-SEP-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Staphylococcal/streptococcal pyrogenic toxin-derived peptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'n,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Visvanathan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0168303
99US-0335581
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and reducing the symptoms of toxic shock staphylococcal and streptococcal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 toxic shock;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 infection;
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino acid sequences of the peptides are sufficiently common that they can be used for eliciting antibodies which are cross-reactive with toxins derived from various bacteria. Sequences ANY97838-Y978343 represent the synthetic peptides based on consensus consensus regions 1 and 2 of Staphylococcus aureus and Group A streptococcal pyrogenic toxins. These peptides can be administered to a mammal to raise serum antibodies
                                            The peptide, nucleic acid encoding the peptide and antibody (Ab) product against the peptide are useful for inhibiting blastogenesis of mononuclear cells (eq. T cells) in the presence of human immunodeficien wirus (HIV), inhibiting HIV replication and protecting a mammal against the deleterious effects of HIV. The peptide is also used to ameliorate the effects of autoimmune diseases associated with the presence of HIV. The Ab is used for passively immunising a mammal against the deleterious that the peptide is also used to ameliorate the effects of autoimmune diseases associated with the presence of HIV.
                                                                                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                  providing protection against, and reducing the severity of, human immunodeficiency virus infections and associated deleterious effections peptides from homologous sequences of staphylococcal and streptococcal toxins.
                                                                                                                                                                                                                                                                                                                                                   WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Streptococcus sp. Staphylococcus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                staphylococcal enterotoxin; human immunodeficiency virus; T cell; streptococcal pyrogenic exotoxin; autoimmune disease; immunisation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptide #6348,
                                  effects
                                                                                                                                                                from the homologous sequences of staphylococcal streptococcal pyrogenic exotoxin.
                                                                                                                                                                                 The present sequence is peptide #6348, a cross-linked polymer from the homologous sequences of staphylococcal enterotoxin ar
                                                                                                                                                                                                                                                                                                                                                                                  Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-JUN-2000; 2000WO-US16680
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mononuclear cell; blastogenesis; inhibitor; HIV; replication;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY72181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY72181 standard; peptide;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for protection against or amelioration of toxic or septic shock.
                                                                                                                                                                                                                                                                                                                                                                                                                 (UYRQ ) UNIV ROCKEFELLER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CMYGGVTEHEGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       presence of staphylococcal or streptococcal pyrogenic toxins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cmyggvtehegn
                                                                                                                                                                                                                                                                                                                                                   2001-080820/09
                                                                                                                                                                                                                               5; Page 38; 76pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12;
                                  of HIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0336627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   derived from streptococcal and staphylococcal
                                                                                                                                                                                                                                                                                                                                                                                  Zabriskie JB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 72; DB 21; L
Pred. No. 1.2e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
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                                                                                                                 immunodeficiency
                                                                                                                                                                                                                                                                                ous effects,
l and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    toxins.
                                                                                                                                                                                                  derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                  against
                                                                                                                                                produced
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Best Local
       The invention also relates to serum antibodies induced by the peptides which provide protection against, or reduce the severity of toxic shock and septic shock caused by the staphylococcal and streptococcal pyrogenic toxins. The pyrogenic exotoxins of Group A streptococci and the enterotoxins of Staphylococcus aureus (which are also pyrogenic exotoxins) constitute a family of structurally related toxins which share similar biological activities. They stimulate CD4+, CD8+ and gamma-delta+ T-cells by binding the beta-chain variable region (V-beta) elements on the lateral face of the T-cell receptor (TCR) while simultaneously binding the lateral face of the class II major histocompatibility complex (MHC) of antigen presenting cells. This causes histocompatibility complex (MHC) of antigen presenting cells.
                                                                                                                                                                                                                (AAY97864), where: X1, X8, X13 and X24 are each independently selected from L, I and V; X2,X4, X5, X6, X7, X9, X10, X11, X12, X14, X15, X16, X17, X18, X19, X20, X21, X22 and X23 are each independently selected from the group consisting of any amino acid; X3, X5 and X26 are each independently selected from the group consisting of any amino acid and of no amino acid; X27 is either L or Y.
                                                                                                                                                                                                                                                                                                                                             the sequence K-X6-X7-X8-
X9-X10-X11-X12-X13-D-X14-X15-X16-R-X17-X18-X27-X19-X20-X21-X22-X23-X24-Y
                                                                                                                                                                                                                                                                                                                                                                                            (regions 1 and 2) of Staphylococcus aureus enterotoxins and streptococcal pyrogenic toxins. Consensus region 1a (a preferred consensus region 1) has the sequence x25 x26 Y-G-G-X1-Y-X2-X3-X4-X5-N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to novel peptides (AAY97838-Y97843) comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptides useful for preventing syndrome and septic shock from infections -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-OCT-1998;
18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         consensus amino acid sequence derived from two conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; Page 72; 115pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bannan JD, Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-APR-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Staphylococcus aureus.
                                                                                                                                                                                                                                                                                                                                                                             (AAY97863) and consensus region 2a (a preferred consensus region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY97845 standard; peptide; 12 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UYRQ ) UNIV ROCKEFELLER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Staphylococcal infection; enterotoxin; septic shock; toxic shock;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Staphylococcus aureus enterotoxin SEB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             y match 100.0%;
Local Similarity 100.0%;
nes 12; Conservative 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 cmyggvtehegn 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CMYGGVTEHEGN 12
 proliferation of T-cells,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0168303
99US-0335581
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zabriskie JB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                      and X23 are each independently selected from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 72; DE
Pred. No. 1.2
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and reducing the symptoms of toxic shock staphylococcal and streptococcal
which stimulates other components of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        conserved region 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; DB 22;
. 1.2e-05;
ches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the immune system, causing injury to the host. The peptides are used to prevent, treat or protect against toxic shock and septic shock resulting from bacterial infections in mammals, particularly humans. The peptides are used for inducing serum antibodies that bind at least one staphylococcal enterotoxin or streptococcal exotoxin and both the peptides and antibodies can be used not diagnostic assays to aid in the diagnosis of disease related to the presence of bacterial toxins. Nucleic acids encoding a peptide of the invention can be used for the production of the peptides for diagnostic reagents, as vaccines and for theraples for the peptides can be used in immunotherapy and immunoprophylaxis when expressed in humans. The antibodies are used for passive immunisation therapy are the production of the peptides can be used in immunotherapy and immunoprophylaxis when expressed in humans. The antibodies are used for passive immunisation therapy are the production of the peptides can be used in immunotherapy and immunoprophylaxis when expressed in humans. The antibodies are used for passive immunisation that the peptides can be used in the peptides can be used in immunotherapy and immunoprophylaxis when the peptides can be used in immunotherapy and immunisation that the peptides can be used in the peptides can be used to passive immunisation that the peptides can be used to perform the perform the peptides can be used to perform the peptides can be us
                                                                                                                                                                                                      Peptides useful for preventing and reducing the symptoms of toxic shock syndrome and septic shock from staphylococcal and streptococcal
                                                                                                                                                                                                                                                                                                                                                                                                                                       07-OCT-1998;
18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   therapy to prevent or increase resistance to toxic shock syndrome or septic shock and to ameliorate the effects of conditions associated with the presence of staphylococcal or streptococcal pyrogenic toxins. The amino acid sequences of the peptides are sufficiently common that they can be used for eliciting antibodies which are cross-reactive with toxins derived from various bacteria. Sequences AAY97844-Y97852 represent
                                                                                                                                                                                                                                                                                  WPI; 2000-303782/26
                                                                                                                                                                                                                                                                                                                                   Bannan JD,
                                                                                                                                                                                                                                                                                                                                                                                    (UYRQ ) UNIV ROCKEFELLER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Staphylococcus aureus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  vaccine; antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Staphylococcal infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Staphylococcus aureus enterotoxin SEC, conserved region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-AUG-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY97846 standard; peptide; 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                derived from various bacteria. Sequences AAY97844-Y97852 represent conserved region 1 of various Staphylococcus aureus enterotoxins and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 cmyggvtehngn
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 AA;
                                                                                                                                                                                                                                                                                                                                   Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0168303
99US-0335581
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93.1%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       enterotoxin; septic shock; toxic shock;
                                                                                                                                                                                                                                                                                                                                   Zabriskie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 67; DB 21;
Pred. No. 2.6e-05;
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                                                                                                                                                                                                                                                                                                                                   JB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
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The invention relates to novel peptides (AAY97838-Y97843) comprising consensus amino acid sequence derived from two conserved regions (regions 1 and 2) of Staphylococcus aureus enterotoxins and

Example 1;

72;

115pp; English.

streptococcal pyrogenic toxins. Consensus region la

preferred

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ARESULT JANY ARESULT JANY ARESULT JANY ARESULT ARESULT JANY ARESULT AR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 93...
Best Local Similarity 83...
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diagnosis of disease related to the presence of bacterial toxins. Nucleic acids encoding a peptide of the invention can be used for the production of the peptides for diagnostic reagents, as vaccines and for therapies for pyrogenic exotoxin related diseases. Vectors expressing high levels of the peptides can be used in immunotherapy and immunoprophylaxis when expressed in humans. The antibodies are used for passive immunisation therapy to prevent or increase resistance to toxic shock syndrome or septic shock and to ameliorate the effects of conditions associated with the presence of staphylococcal or streptococcal pyrogenic toxins. The amino acid sequences of the peptides are sufficiently common that they can be used for eliciting antibodies which are cross-reactive with toxins derived from various bacteria. Sequences AAY97844-Y97852 represent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (AAY97864), where: x1, x8, x13 and x24 are each independently selected from L, I and Y; x2,x4, x5, x6, x7, x9, x10, x11, x12, x14, x15, x16, x17, x18, x19, x20, x21, x22 and x23 are each independently selected from the group consisting of any amino acid; x3, x5 and x26 are each independently selected from the group consisting of any amino acid and of no amino acid;
                                                                                                                                                                                                               Mononuclear cell; blastogenesis; inhibitor; HIV; replicatistaphylococcal enterotoxin; human immunodeficiency virus; autoimmune disease; immunisation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         which provide protection against, or reduce the severity of toxic shock and septic shock caused by the staphylococcal and streptococcal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               x27 is either L or Y.
The invention also relates to serum antibodies induced by the peptides
which provide protection against, or reduce the severity of toxic shoc
          WO200078790-A2
                                                                                                       Staphylococcus sp
                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide from region 1 of staphylococcal enterotoxin SEB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY72183
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      derived from various bacteria. Sequences AAY97844-Y97852 represenconserved region 1 of various Staphylococcus aureus enterotoxins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           consensus region 1) has the sequence x25-x26-Y-G-G-X1-T-X2-X3-X4-X5-N (AAY97863) and consensus region 2) has the sequence K-X6-X7-X8-X9-X10-X11-X12-X13-D-X14-X15-X16-R-X17-X18-X27-X19-X20-X21-X22-X23-X24-Y
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|cmyggitkhegn 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 67; DB 21; Pred. No. 2.6e-05; No. 2.6e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exotoxins.
                                                                                                                                                                                                                                                                                                                       HIV; replication;
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                                                                                                                                                                                                                                                                      T cell;
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                                                                                                                                                                                                                                                                                                                       therapy;
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Search completed: January
Job time: 10129 sec
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                                                                                                                                             Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                  The present sequence is a peptide from region 1 of staphylococcal enterotoxin SEB.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Providing protection against, and reducing the severity of, human immunodeficiency virus infections and associated deleterious effects, using peptides from homologous sequences of staphylococcal and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI;
                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                             Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                         streptococcal toxins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-JUN-2000;
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                                                                      1 cmyggvtehngn
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                                                                                                   CMYGGVTEHEGN
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                                                                                                                                 11;
                                                                                                                                                                                                                                     of HIV.
                                                                                                                                                                                                       12 AA;
                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                            Page 36; 76pp; English.
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                                                                         12
                                                                                                   12
                                                                                                                                            93.1%;
91.7%;
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               2002, 20:48:13
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                                                                                                                                Score 67; DB Pred. No. 2.66 0; Mismatches
                                                                                                                                                           BG
                                                                                                                                             DB 22;
.6e-05;
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                                                                                                                                 Indels
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Minimum DB
Maximum DB
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run
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    Query Match 100.0%; Score 72; DB 3;
Best Local Similarity 100.0%; Pred. No. 4.1e-06;
Matches 12; Conservative 0; Mismatches 0;
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Query Match 100.0%; Score 72; DB 3; Length Best Local Similarity 100.0%; Pred. No. 4.1e-66;	US-08-838-413A-3 US-08-838-413A-3 Sequence 3, Application US/08838413A PRICANT: APPLICANT: USA USTATE: CORRESPONDENCE ADDRESS: COUNTRY: USA ZIP: 10154 COMPUTER READABLE FORM: COMPUTER READABLE FORM: COMPUTER READABLE FORM: COMPUTER READABLE FORM: COMPUTER IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTMARE: WORDDERRECT 5.1 CURRENT APPLICATION NUMBER: FILING DATE: CLASSIFICATION NUMBER: FILING DATE: CLASSIFICATION: TRECEPONE: CLASSIFICATIO	ALIGNMENTS	28 55 76.4 14 4 US-08-896-933-9 29 55 76.4 23 1 US-08-220-378-5 30 55 76.4 23 2 US-08-896-933-24 31 55 76.4 223 4 US-08-896-933-23 32 55 76.4 232 4 US-08-896-933-23 33 55 76.4 233 1 US-08-446-918A-4 34 55 76.4 233 1 US-08-446-099-112 35 55 76.4 257 3 US-08-486-099-112 36 55 76.4 257 3 US-08-486-099-113 37 55 76.4 257 3 US-08-360-107A-122 38 55 76.4 257 3 US-08-360-107A-122 39 55 76.4 257 3 US-08-360-107A-122 40 55 76.4 257 3 US-08-484-223B-112 41 55 76.4 257 3 US-08-484-223B-112 42 55 76.4 257 3 US-08-484-23B-112 43 55 76.4 257 3 US-08-919-597-112 45 76.4 257 3 US-08-919-597-113 45 76.4 257 3 US-08-919-597-113 45 76.4 257 3 US-08-919-597-113 46 55 76.4 257 3 US-08-919-597-113 47 55 76.4 257 3 US-08-919-597-113 48 55 76.4 257 3 US-08-919-597-113 49 55 76.4 257 3 US-08-919-597-113
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; TYPE: AMINO ACID
STRANDEDNESS: UNKNOWN
TOPOLOGY: UNKNOWN
MOLECULE TYPE: PEPTIDE
US-08-838-413A-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: MORRY, MARY J.
NAME: MORRY, MARY J.
REGISTRATION NUMBER: 34,398
REFERENCE/DOCKET NUMBER: 20.6
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)758-4800
TELEPAX: (212)751-6849
INFORMATION FOR SEQ ID NO: 5:
                                                                                                                     Sequence 7, Application US/08838413A Patent No. 6075119
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Best Local Similarity
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                                                                                                       GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: PEP
TITLE OF INVENTION: RED
NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/838,413A
FILLING DATE: 07-APR-1997
CLASSIFICATION: 536
                                                                                       APPLICANT:
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CORRESPONDENCE ADDRESS:
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STATE: NEW YORK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 536
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                              PEPTIDES USEFUL FOR REDUCING SYMPTOMS OF TOXIC SHOCK SYMDROME
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Pred. No. 4.8e-06;
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Best Local Similarity
Matches 12; Conser
                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: (212)758-4800
TELEPAX: (212)751-6849
INFORMATION FOR SEQ ID NO: 7:
                                                                            SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
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TITLE OF INVENTION:
TITLE OF INVENTION:
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NAME: MORRY, MARY J.
REGISTRATION NUMBER: 34,398
REFERENCE/DOCKET NUMBER: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: WORDPERFECT 5.1 CURRENT APPLICATION DATA:
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FILING DATE: 07-APR-1997
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
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STREET: 345 PARK
CITY: NEW YORK
STATE: NEW YORK
                             APPLICATION NUMBER: US/08/838,413A FILING DATE: 07-APR-1997 CLASSIFICATION: 536
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STRANDEDNESS: UNF
TOPOLOGY: UNKNOWN
                                                                                                              COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS
APPLICATION NUMBER:
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                                                                                                                                                                                    COUNTRY: UZIP: 10154
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                                                                                                                                                                                                                 NEW YORK
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                                                                                                              PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                   PEPTIDES USEFUL FOR REDUCING SYMPTOMS OF TOXIC SHOCK SYMDROME 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 72; DB 3; 100.0%; Pred. No. 1.3e-05;
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FILING DATE:

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US-08-838-413A-10 : Sequence 10, Application US/08838413A ; Patent No. 6075119
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Best Local Similarity 100.0%;
Matches 12; Conservative 0
                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/838,413A
FILING DATE: 07-APR-1997
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
CLASSIFICATION:
FILING TORNEY JAGENT INFORMATION:
NAME: MORRY, MARY J.
REGISTRATION NUMBER: 34,398
REGISTRATION NUMBER: 34,398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (212)751-6849 INFORMATION FOR SEQ ID NO:
                                                                                            REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)758-4800
TELEFAX: (212)751-8649
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: PEPTIDES USEFUL FOR TITLE OF INVENTION: REDUCING SYMPTOMS OF TOXIC SHOCK SYNDROME NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 20:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: MORRY, MARY J.
REGISTRATION NUMBER: 34,398
REGISTRATION NUMBER: 20:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: AMINO ACID
STRANDEDNESS: UNKNOWN
TOPOLOGY: UNKNOWN
MOLECULE TYPE: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                              SEQUENCE CHARACTERISTICS:
TYPE: AMINO ACID STRANDEDNESS: UNKI
                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: WORDPERFECT 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
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1 CMYGGVTEHEGN 12
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                      UNKNOWN
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                                                              RESULT 7
US-08-896-933-3
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; MOLECULE TYPE: PEPTIDE
US-08-838-413A-11
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                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: MORRY, MARY J.
REGISTRATION NUMBER: 34,398
REFERENCE/DOCKET NUMBER: 2016
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)758-4800
TELEPHONE: (212)751-6849
INFORMATION FOR SEQ ID NO: 11:
Sequence 3, Application US/08896933 Patent No. 6221351
GENERRAL INFORMATION:
APPLICANT: Terman, David S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No.
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Best Local Similarity
Matches 11; Conserv
                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/
FILING DATE: 07-APR-1997
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                      TYPE: AMINO ACID
STRANDEDNESS: UNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: NEW YORK
STATE: NEW YORK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 10154
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                                                                                                                                                             1 CMYGGVTEHEGN 12
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                                                                                                                               CMYGGITKHEGN 12
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                                                                                                                                                                                                           93.1%;
83.3%;
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91.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/838,413A
                                                                                                                                                                                            Score 67; DB 3;
Pred. No. 2.8e-05;
2; Mismatches (
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Pred. No. 2.8e-05;
0; Mismatches 1
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; SEQ ID NO 5
, LENGTH: 14
; TYPE: PRT
; ORCANISM: Staphylococcus aureas
US-08-896-933-5
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LENGTH: 13
TYPE: PRT
NUMBER OF SEQ ID NOS: 34
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 28
LENGTH: 238
                                                                                                                                                                                                                                  GENERAL INFORMATION: APPLICANT: Terman, David S.
                                                                                                                                                                                                                                                                           Sequence 28, Application US/08896933 Patent No. 6221351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local (
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Patent No. 6221351
GENERAL INFORMATION:
APPLICANT: Terman, David S.
TITLE OF INVENTION: SUPERANTIGENS, AND RELATED COMPOUNDS
FILE REFERENCE: 09629/005002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                            CURRENT APPLICATION NUMBER: US/08/896,933
CURRENT FILING DATE: 1997-07-18
EARLIER APPLICATION NUMBER: 08/252,978
EARLIER FILING DATE: 1994-06-02
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Best Local Similarity
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                                                                                                                                                                    TITLE OF INVENTION: TUMOR KILLING EFFECTS OF ENTEROTOXINS TITLE OF INVENTION: SUPERANTIGENS, AND RELATED COMPOUNDS FILE REFERENCE: 09629/005002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/08/896,933
CURRENT FILING DATE: 1997-07-18
EARLIER APPLICATION NUMBER: 08/252,978
EARLIER FILING DATE: 1994-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: TUMOR KILLING EFFECTS OF ENTEROTOXINS, TITLE OF INVENTION: SUPERANTICENS, AND RELATED COMPOUNDS FILE REFERENCE: 96629/005002 CURRENT APPLICATION NUMBER: US/08/896,933 CURRENT FILING DATE: 1997-07-18 EARLIER APPLICATION NUMBER: 08/252,978 EARLIER APPLICATION NUMBER: 08/252,978 EARLIER FILING DATE: 1994-06-02 NUMBER: 05/252,978 EARLIER FILING DATE: 1994-06-02 NUMBER: 05/252,978 EARLIER FILING DATE: 1994-06-02
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SOFTWARE: FastSEQ for Windows Version 3
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nes 10; Conserv
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91.7%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 67; DB 4;
Pred. No. 3.2e-05;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; SEQ ID NO 26
; LENGTH: 239
; TYPE: PRT
                                                   Matches
                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                               SEQ ID NO 27
LENGTH: 239
                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 27, Application US/08896933 Patent No. 6221351
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Best Local Similarity
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Best Local
                                                                                                                                                                                                                                                                                                                                          APPLICANT: Terman, David S.
TITLE OF INVENTION: TUMOR KILLING EFFECTS OF ENTEROTOXINS,
TITLE OF INVENTION: SUPERANTIGENS, AND RELATED COMPOUNDS
FILE REFERENCE: 09629/005002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Terman, David S.

TITLE OF INVENTION: TUMOR KILLING EFFECTS OF ENTEROTOXINS,

TITLE OF INVENTION: SUPERANTICENS, AND RELATED COMPOUNDS

FILE REFERENCE: 09629/005002

FULL REFERENCE: 09629/005002

FULL REFERENCE: 09629/005002

GURRENT FILING DATE: 1997-07-18

EARLIER APPLICATION NUMBER: 08/252,978

EARLIER APPLICATION NUMBER: 08/252,978

EARLIER FILING DATE: 1994-06-02

NUMBER OF SEQ ID NOS: 34

SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                EARLIER APPLICATION NUMBER: 08/252,978
EARLIER FILING DATE: 1994-06-02
NUMBER OF SEQ ID NOS: 34
SOFTWARE: FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/08/896,933 CURRENT FILING DATE: 1997-07-18
                                                                                                                                                                                TYPE: PRT
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1 CMYGGVTEHEGN 12
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nes 10; Conserv
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                                                     Conservative
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                                                                      93.1%;
83.3%;
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91.7%;
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83.3%;
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Pred. No.
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Pred. No. 0.00061;
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Pred. No. 0.00061;
2; Mismatches 0;
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                                                                    0.00061;
                                                                                         DB 4;
                                                                                   Length 239;
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US-08-446-918A-2

Sequence 2, Application US/08446918A Patent No. 5705151

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110 CMYGGITKHEGN 121

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US-08-580-806-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: PATENTIA Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/446,918A
FILING DATE: 18-MAY-1995
CLASSIFICATION: 552
ATTORNEY/AGENT INFORMATION:
NAME: KOVATIK, JOSEPh E.
REGISTRATION NUMBER: 33,005
REFERENCE/DOCKET NUMBER: 2879-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                 Sequence 2, Application US/08580806 Patent No. 5935568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 255 amino acids
                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
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APPLICANT: Elmslie, Robyn E.
TITLE OF INVENTION: GENE THERAPY FOR T CELL REGULATION
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                       NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Ross & McIntosh
                                                                                                                                                                                    APPLICANT: Dow, Steve W.
APPLICANT: Elmslie, Robyn E.
APPLICANT: Pottor, Torence A.
TITLE OF INVENTION: GENE THERAPY FOR EFFECTOR CELL REGULATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: (303) 863-9700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: Co'
                                                                                                                                                                                                                                                                                                                                                                                           129 CMYGGVTEHNGN 140
                                                                                           CITY: Denver
STATE: Colora
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
                                                                       COUNTRY:
                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                            1 CMYGGVTEHEGN 12
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                                                                                         Colorado
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                                                                                                                        1700 Lincoln Street, Suite 3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Sheridan Ross & McIntosh
1700 Lincoln Street, Suite 3500
                                                                       U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            U.S.A.
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NO: 2:
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91.78;
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Pred. No. 0.00065;
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                                                                                                                                    RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WOLECULE TYPE: protein US-08-580-806-2
                                                       ; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                            ; Sequence 20, Application US/08896933
; Patent No. 6221351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 93.1%;
Best Local Similarity 91.7%;
Matches 11; Conservative
                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Terman, David S.
TITLE OF INVENTION: TUMOR KILLING EFFECTS OF ENTEROTOXINS,
TITLE OF INVENTION: SUPERANTIGENS, AND RELATED COMPOUNDS
FILE REFERENCE: 09629/005002
CURRENT APPLICATION NUMBER: US/08/896,933
CURRENT FILING DATE: 1997-07-18
EARLIER APPLICATION NUMBER: 08/252,978
EARLIER APPLICATION NUMBER: 08/252,978
EARLIER FILING DATE: 1994-06-02
NUMBER OF SEQ ID NOS: 34
SOFTWARE: FastSEQ for Windows Version 3.0
APPLICANT: Terman, David S.
TITLE OF INVENTION: TUMOR KILLING EFFECTS OF ENTEROTOXINS,
TITLE OF INVENTION: SUPERANTIGENS, AND RELATED COMPOUNDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (303) 863-02 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                     FEATURE: OTHER INFORMATION: Consensus sequences derived from stapholycoccus OTHER INFORMATION: aureus and streptococcus pyogenes polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-0223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                                                                                                                                                                                                                              Local Similarity
nes 11; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
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                                                                                                                                                                                                                                                                Conservative
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) 863-0223
NO: 2:
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91.7%;
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                                                                                                                                                                                                                                                                               Score 64; Depred No. 0.
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Pred. No. 0.00065;
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: FILE REFERENCE: 09629/005002
: CURRENT APPLICATION NUMBER: US/08/896,933
: CURRENT FILING DATE: 1997-07-18
: EARLIER APPLICATION NUMBER: 08/252,978
: EARLIER FILING DATE: 1994-06-02
: NUMBER OF SEQ ID NOS: 34
: SOFTMARE: FastSEQ for Windows Version 3.0
: SEQ ID NO 20
: TYPE: PAT
: ORGANISM: Streptococcus pyogenes
US-08-896-933-20
                                                                                                                 밁
Search completed: January 2, 2002, 20:46:42 Job time: 11488 sec
                                                                                                                                                                                              Query Match 88.9%; Score 64; DB 4; Length 220; Best Local Similarity 83.3%; Pred. No. 0.0018; Matches 10; Conservative 1; Mismatches 1; Indels
                                                                                                        1 CMYGGVTEHEGN 12
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98 CLYGGVTNHEGN 109
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
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Perfect score:
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     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being print and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
     protein search, using sw model
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1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
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Match
  BLOSUM62
Gapop 10.0 , Gapext 0.5
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72
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	52.8	52.8	52.8	52.8	52.8	52.8	52.8	54.2	54.2	54.2	54.2	54.2	54.2	55.6	55.6	55.6
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	2	N	N	ນ	N	N	N	N	N	N	N	2	N	N	N	N
ALIGNMENTS	T09458	T45219	T15310	\$67305	S69881	S30238	S54733	T34288	D71192	F75151	T19423	T19427	T26790	S65057	T40622	A82166
	numb-binding prote	regulator of pre-m	hypothetical prote	phosphopyruvate hy	phosphopyruvate hy	finger protein ZNF	ribosomal protein	hypothetical prote	alpha-glucosidase	translation elonga	conserved hypothet					

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R;Schmidt, J.J.; Spero, L.

J. Biol. Chem. 258, 6300-6306, 1983
A;Title: The complete amino acid sequence of Staphylococcal ente
A;Reference number: A01816; MUID:83213327
A;Accession: A01816
A;Molecule type: protein
A;Residues: 28-75, 'IL',78-176,'N',178-266 <SCH>
C;Genetics:
A;Gene: entC1
C;Superfamily: enterotoxin B
C;Keywords: enterotoxin
F;1-27/Domain: signal sequence #status predicted <SIG>
F;28-266/Product: enterotoxin C-1 #status experimental <MAT>
F;120-137/Disulfide bonds: #status experimental
                                                                                                                                                                           enterotoxin C-2 precursor - Staphylococcus aureus
N;Alternate names: enterotoxin C-3 precursor
C;Species: Staphylococcus aureus
C;Date: 10-Nov-1992 #sequence_revision 10-Nov-1992 #t
C;Accession: A60114; B60114; A33866
R;Bohach, G.A.; Schlievert, p.M.
Infect. Immun. 57, 2249-2252, 1989
A;Fitle: Conservation of the biologically active port
A;Reference number: A60114; MUID:89277549
A;Accession: A60114
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-266 <BOH>
A;Accession: B60114
A;Accession: B60114
                                    R;Couch, J.L.; Betley, M.J.
J. Bacteriol. 171, 4507-4510, 1989
A;Title: Nucleotide sequence of the type C-3 staphylococcal enterotoxin gene suggests A;Reference number: A33866; MUID:89327174
A;Accession: A33866
A;Status: preliminary A;Molecule type: DNA
                                                                                                                                          A; Molecule type: protein A; Residues: 28-66 < BOH2>
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C;Date: 15-Nov-1984 #sequence_revision 05-Jan-1996 #text_change 18-Jun-1999
C;Accession: S06356; A01816
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A; Residues: 1-266 <BOH>
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83.3%;
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91.7%;
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Pred. No. 0.00017;
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C;Accession: A26152

R;Johnson, L.P.; L'Italian, J.J.; Schlievert, P.M.

Mol. Gen. Genet. 203, 354-356, 1986

A;Title: Streptococcal pyrogenic exotoxin type A (scarlet fever toxin) is A;Reference number: A26152; MUID: 86284313

A;Accession: A26152

A;Molecule type: DNA
A;Residues: 1-250 < JOH:
C;Keywords: exotoxin B
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 В
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                                                                                                                                                                                                                                                                                                                                               streptococcal pyrogenic exotoxin N; Alternate names: scarlet fever
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Mol. Gen. Genet. 220, 329-333, 1990
A;Title: Nucleotide sequence of the staphylococcal enterotoxin C3 gene: sequence comp A;Reference number: S11885; MUID:90220508
A;Accession: S11885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         enterotoxin C3 - Staphylococcus aureus
C;Species: Staphylococcus aureus
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 16-Jul-1999
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S11885
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A;Cross references: GB:M28364; NID:g153003; PIDN:AAA26624.1;
C;GenetLos:
C;GenetLos:
A;Gene: entC2
C;Superfamily: enterotoxin B
F;1-27/Domain: signal sequence #status predicted <SIG>
F;28-266/Product: enterotoxin C-2 #status predicted <MAT>
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A; Residues: 1-266 <HOV>
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Best Local
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CLYGGVTNHEGN 139
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10; Conservative
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83.3%;
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C-2 #status predicted <MAT>
                                                             Score 64; DB
Pred. No. 0.00
1; Mismatches
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toxin; SPE type A (speA)
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.00017;
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C; Bate: 29-Jan-1993 #sequence_revision Streptococc
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                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-236 <NEA>
A; Cross-references: EMBL:X61562; NID:g47299; PIDN:CAA43760.1; PID:g47300
A; Experimental source: strain MGAS251 isolate California unassignd phage
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, i
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A;Accession: S18789
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                       A; Molecule type: DNA
A; Residues: 1-236 <N
                                                                            A;Status: nucleic
                                                                                                 A; Accession: S18790
                                                                                                                      A; Note: the nucleotide sequence
                                                                                                                                                A;Residues: 1-236 <NEZ>
A;Residues: 1-236 <NEZ>
A;Cross-references: EMBL:X61563; NID:g47301; PIDN:CAA43761.1; PID:g47302
A;Experimental source: strain MGAS256 isolate California unassigned phag
                                                                                                                                                                                                                                            A;Accession: S18788
A;Status: nucleic acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                               A; Status: nucleic acid sequence not shown; translation not shown
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: EMBL:X61561; NID:g47297; PIDN:CAA43759.1; PID:g47298 A;Experimental source: strain MGAS250 isolate California unassigned phage A;Note: the nucleotide sequence was submitted to the EMBL Data Library, S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-236 <NEL>
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A;Note: the nucleotide sequence was submitted to the EMBL Data Library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-236 <NEL>
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J. Exp. M
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:Cross-references: EMBL:X61564; NID:g47305; PIDN:CAA43762.1; PID:g47306
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Med. 174, 1271-1274, 199
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                       -236 <NEY>
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83.3%;
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Pred. No. 0.00078;
L; Mismatches 1;
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C;Keywords: exotoxin
F;1-22/Domain: signal sequence (
F;23-236/Product: exotoxin type
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                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-236 <NEA>
A; Residues: 1-236 <NEA>
A; Cross-references: EMBL: X61569; NID: g47313; PIDN: CAA43767.1; PID: g47314
A; Experimental source: strain MGA5485 isolate Yugoslavia unassigned phage
A; Note: the nucleotide sequence was submitted to the EMBL Data Library,
A; Accession: S18794
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Streptococcus pyogenes phage A;Variety: strain MGAS188 isolate Nugoslavia; strain C;Date: 29-Jan-1993 #sequence_revision 29-Jan-1993 #text_change 16-Jul-1999 C;Accession: S18783; S18793; S18794; S18801; S18798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exotoxin type A precursor (allele 3) - Streptococcus pyogenes phage (strain N; Alternate names: scarlet fever toxin
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A;Cross-references: EMBL:X61570; NID:947315; PIDN:CAA43768.1; PID:947316 A;Experimental source: strain MGAS491 isolate United Kingdom unassigned A;Note: the nucleotide sequence was submitted to the EMBL Data Library,
                                                                                     A; Molecule type: DNA
A; Residues: 1-236 <NEZ>
                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:X61568; NID:947289; PIDN:CAA43766.1; PID:947290 A;Experimental source: strain MGAS158 isolate Nebraska unassigned phage A;Note: the nucleotide sequence was submitted to the EMBL Data Library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Status: nucleic acid:
A; Molecule type: DNA
A; Residues: 1-236 <NEL>
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A;Experimental source: strain MGAS496 isolate Germany unassigned phage
A;Note: the nucleotide sequence was submitted to the EMBL Data Library,
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A; Residues: 1-236 <NEH>
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Pred. No. 0.00078;
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September 199

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A;Gene: speA3
C;Superfamily: entero:
C;Keywords: exotoxin
F;1-22/Domain: signal
F;23-236/Product: exot
                                                                                 A;Cross-references: EMBL:X61559; NID:g47293; PIDN:CAA43757.1; PID:g47294
A;Experimental source: Streptococcus pyogenes strain MGAS167 isolate Texas unassigned
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 1991
                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: EMBL:X61556; NID:g47291; PIDN:CAA43754.1; PID:g47292
A;Experimental source: Streptococcus pyogenes strain MCAS165 isolate Minnesota unassigne
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 1991
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A;Experimental source: Streptococcus pyogenes strain MGAS156 isolate Nebraska unassigned A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 1991
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                  A;Status: nucleic acid
                                                                    A; Accession: S18791
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A; Residues: 9-244 <NEZ>
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A; Residues: 9-244 <NEL>
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A; Residues: 1-251 <WEE>
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A;Accession: S29659
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Infect. Immun. 52, 144-150, 1986
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A;Experimental source: strain MGAS495 isolate Germany unassigned phage
A:Note: the nucleotide sequence was submitted to the EMBL Data Library, C;Genetics:
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A;Status: nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Residues: 1-236 <NEO>
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A;Experimental source: strain MGAS624 isolate Germany unassigned phage
A;Note: the niceptide sequence was submitted to the EMBL Data Library, September 1991
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A: Residues: 1-236 <NEY>
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A; Status: nucleic a
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Exp. Med. 174, 1271-1274, 1991

Exp. Med. 174, 1271-1274, 1991

Exp. Med. 174, 1991

Exp. Me
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                  sequence
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83.3%;
                  not
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A (fragment) #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                    not shown; translation not
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CTYGGVTPHEGN

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precursor

Staphylococcus aureus

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A;Cross-references: GB:M28521; C;Superfamily: enterotoxin B
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A; Residues: 1-258 <BAY>
                                                                                                                                                                                                                                                               A; Status: preliminary
                                                                                                                                                                                                                                                                                     J. Bacteriol. 171, 4799-4806, 1989
A;Title: Genetic and molecular analyses of
A;Reference number: A33953; MUID:89359112
A;Accession: A33953
                                                                                                                                                                                                                                                                                                                                                                                                               C; Accession: A33953
                                                                                                                                                                                                                                                                                                                                                                                                                                                         enterotoxin D precursor -
C; Species: Staphylococcus
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A; Residues: 9-244 <NEY>
A; Residues: 9-244 <NEY>
A; Cross-references: EMBL:x61555; NID:g47309; PIDN:CAA43753.1; PID:g47310
A; Cross-references: EMBL:x61555; NID:g47309; PIDN:CAA43753.1; PID:g47310
A; Experimental source: Streptococcus pyogenes strain MGAS327 isolate Arizona unassign
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, September 199
A; Accession: S18796
A; Status: nucleic acid sequence not shown; translation not shown
A; Molecule type: DNA
A: Note: Chada Arron.
                                                                                                                                                                                                                                                                                                                                                                                     R; Bayles, K.W.; Iandolo, J.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Date: 09-Mar-1990 #sequence_revision 09-Mar-1990
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C;Superfamily: enterotoxin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: EMBL:X61558; NID:g47321; PIDN:CAA43756.1; PID:g47322
A;Experimental source: Streptococcus pyogenes strain MGAS494 isolate France
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, Sept
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Keywords: exotoxin
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A; Residues: 9-228 <NES>
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A; Residues: 9-244 < NEH>
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A;Experimental Source: Streptococcus pyogenes strain MCAS493 isolate France unassigne
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 199
A;Accession: S18797
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Best Local
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Best Local
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1 CMYGGVTEHEGN 12
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                                             l Similarity
10; Conser
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Pred. No. 0.
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:ember 199
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R:Couch, J.L.; Soltis, M.T.; Betley, M.J.
J. Bacteriol. 170, 2954-2960, 1988
A:Title: Cloning and nucleotide sequence of A:Reference number: A28179; MUID:88257005
A:Accession: A28179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A:Cross-references: GB:M18970: NID:g153120; PIDN:AAA26681.1; PID:g15
A:Experimental source: strain FRI37
R:Huang, I.Y.; Hughes, J.L.; Bergdoll, M.S.; Schantz, E.J.
J. Biol. Chem. 262, 7006-7013, 1987
A:Title: Complete amino acid sequence of staphylococcal enterotoxin
A:Reference number: A29566; MUID:87222293
A:Accession: A29566
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                                       A; Title: Isolation of cDNAs for LCE and HCE, A; Reference number: A48826; MUID:93012471 A; Accession: B48826
                                                                                                         R;Yasumasu, S.; Yamada, K.; Akasaka, K.; Mitsunaga, K.; Iuchi, I.; Shimada, H.; Yamagam
Dev. Biol. 153, 250-258, 1992
                                                                                                                                                     C; Accession: B48826
                                                                                                                                                                        high choriolytic hatching proteinase (EC 3.4.24.-) HCE23 precursor - Japanese C:Species: Oryzias latipes (Japanese medaka)
C:Date: 01-Dec-1993 #sequence_revision 18-Nov-1994 #text_change 21-Jul-2000
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A; Residues: 1-257 <COU>
A; Cross-references: GB: M21319;
C; Superfamily: enterotoxin B
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C; Superfamily: enterotoxin
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A; Residues: 25-241, 'S', 243-257 < HUA>
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A; Residues: 1-257 <BET>
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C;Date: 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change 15-Oct-1999
C;Accession: A28664; A29566
A; Molecule type: mRNA; protein A; Residues: 1-270 < YAS>
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Best Local Similarity
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Best Local
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Bacteriol. 170, 34-41, 1988
                                                                                                                                                                                                                                                                                                                                       130
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nes 9; Conser
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75.08;
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Pred. No. 0.
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Pred. No. 0.023;
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                                                                                    constituent proteases of the hatching
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A;Cross-references: GB:M96170; NID:g213501; PIDN:AAA49438.1; PID:g213502
A;Experimental source: orange red variety, embryo
A;Note: sequence extracted from NCBI backbone (NCBIN:114769, NCBIP:114770)
A;Note: part of this sequence, including the amino end of the mature protei
C;Superfamily: astacin; astacin homology
C;Superfamily: astacin; hydrolase; metalloproteinase; zinc
C;Keywords: glycoprotein; hydrolase; metalloproteinase; zinc
F;1-20/Domain: signal sequence *status predicted <SIG>
F;21-70/Domain: propeptide *status predicted <FRO>
F;21-70/Domain: propeptide *status predicted <PRO>
F;71-270/Product: low choriolytic hatching proteinase *status predicted <PRO F;88-270/Domain: astacin homology <AST>
F:53/Binding site: carbohydrate (Asn) (covalent) *status predicted
F;169,173,179,225/Binding site: zinc (His, His, Tyr) *status predicted
F;170/Active site: Glu *status predicted
                                                                                                                                                                          hypothetical protein T25B9.2 - Caenorhabditis elegans
C:Species: Caenorhabditis elegans
C:Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 31-Jan-2000
C:Accession: T25259
R:Matthews, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Superfamily: astacin; astacin homology
C;Reywords: glycoprotein; hydrolase; metalloproteinase; zinc
F;1-20/Domain: signal sequence *status predicted <SIG>
F;21-79/Domain: propeptide *status predicted <PRO>
F;80-279/Product: low choriolytic hatching proteinase *status predicted <MAT>
F;97-779/Domain: astacin homology <AST>
                                                                                                                                                                                                                                                                                                              RESULT
T25259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Title: Isolation of cDNAs for LCE and HCE, A;Reference number: A48826; MUID:93012471 A;Accession: C48826
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Best Local Similarity
The 7; Conserve
                                                                                                                              submitted to the EMBL Data A; Reference number: 220006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
7; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;62/Binding site: carbohydrate (Asn) (covalent) *status predicted F;178,182,188,234/Binding site: zinc (His, His, His, Tyr) *status F;179/Active site: Glu *status predicted
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A; Residues: 1-279 < YAS>
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Dev. Biol. 153, 250-258, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Date: 08-Feb-1996 #sequence_revision 08-Feb-1996 #text_change 03-Dec-1999
C;Accession: C48826
A; Cross-references:
                      A; Molecule type: DNA
A; Residues: 1-366 <WIL>
                                                                    A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                A; Reference number:
A; Accession: T25259
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58.3%;
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PIDN:CAA94374.1; GSPDB:GN00022; CESP:T25B9.2
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A;Experimental source: clone T25B9
C;Genetics:
A;Gene: CESP:T25B9.2
A;Map position: 4
A;Introns: 66/3; 171/2; 239/3; 333/1
C;Superfamily: phosphoprotein phosphatase; phosphoesterase core homology; phosphoprotein Query Match
Best Local Similarity 66.7%; Score 45; DB 2; Length 366;
Matches 6; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
Qy 1 CMYGGVTEH 9
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Db 199 CMHGGISEH 207
Search completed: January 2, 2002, 20:49:24
Job time: 784 sec
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Maximum
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Copyright (c) 1993 - 2000 Compugen
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YCCA_BACP3
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YSO_CAEEL
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PIR; A01810; ENSAC1.
PIR; S06356; S06356.
HSSP; P34071; 1SE2.
InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
                                                                                          Enterotoxin;
                                                                                                    PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
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30546 MW;

D -> N (IN REF. 2). ; 3A7AB59A8986853B CRC64;

Toxin;

Superantigen

; Signal; 27 266 137

ENTEROTOXIN

TYPE C-1.

SEQUENCE OF 28-266. MEDILINE-83213327; PubMed-6189824; Schmidt J.J., Spero L.; Schmidt J.J., Spero L.; The complete amino acid sequence of staphyloc. J. Biol. Chem. 258:6300-6306(1983). -I- DISEASE: STAPHYLOCOCCAL ENTEROTOXINS CAUSE STAPHYLOCOCCAL FOOD POISONING SYNDROME. -I- SIMILARITY: THE DIFFERENT S.AUREUS ENTEROTOMY. PYROGENIC EXOTOXINS ARE ALL RELATED. This SETSG-BROT ENTER 18 CONTINENT IT IS DETOCATED.	Firmicutes; Bacillus/Clostridium Firmicutes; Bacillus/Clostridium Staphylococcus group; Staphylococcup-1280; D-1280; FROM N.A. 1803852; PubMed-2823067; A., Schlievert P.M.; A., Schlievert P.M.; de sequence of the staphylococcal de sequence of the staphylococcal ses to other pyrogenic toxins."; Genet. 209:15-20(1987).	ESULT 1 TC1_STAAU STANDARD; PRT; 266 AA. D ETC1_STAAU STANDARD; PRT; 266 AA. C P01553; T 21-UUL-1986 (Rel. 01, Created) T 01-JAN-1990 (Rel. 13, Last sequence update) T 15-UUL-1999 (Rel. 38, Last annotation update) T 15-UUL-1999 (Rel. 38, Last annotation update) E ENTEROTOXIN TYPE C-1 PRECURSOR (SEC1). N ENTC1.	35 36 50.0 841 1 SECA_BACSU 36 36 50.0 842 1 IF2_TREPA 37 36 50.0 908 1 CLC2_MOUSE 38 36 50.0 918 1 SCA_LIMPO 39 36 50.0 1085 1 RBP2_BOVIN 40 36 50.0 1328 1 AGRI_DISOM 41 36 50.0 1955 1 AGRI_CHICK 42 36 50.0 3224 1 RBP2_HUMAN 43 35.5 49.3 1134 1 TIE1_MOUSE 44 35.5 49.3 1138 1 TIE1_HOUSE 45 35 48.6 134 1 YP96_MYCTU 47 ALIGNMENTS	4 36 50 0 775 1
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l enterotoxin Cl."; INTOXICATION S AND S.PYOGENES through a collaboration	C1 gene		P28366 P283661 Q92861 Q253901 Q48820 P491696 P49792 Q06806 P35590 Q50625	060769
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PDB; 1SE2; 08-MAR-96.
InterPro; IPR001961; Staph_Strep_toxin.
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ENTEROTOXIN TYPE C
    SEQUENCE
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1. Mol. Biol. 269:270-280(1997).

1. DISEASE: STAPHYLOCOCCAL ENTEROTOXINS CAUSE THE INTOXICATION STAPHYLOCOCCAL FOOD POISONING SYNDROME.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Schad E.M., Papageorgiou A.C., Svensson L.A., Acharya K.R., "A structural and functional comparison of staphylococcal enterotoxins A and C2 reveals remarkable similarity and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mEDILINE-96022987; PubMed-7552730; Swaminathan S., Furey W.F. Jr., Pletch "Residues defining V beta specificity enterotoxins.";
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_STAAU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPARISON OF STRUCTURE OF SEA AND SEC2
MEDLINE=97334373; PubMed=9191070;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nat. Struct. Biol. 2:680-686(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bohach G.A., Schlievert P.M.; "Conservation of the biologically active portions of staphylococcal enterotoxins Cl and C2.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Structure 3:769-779(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Crystal structure of the superantigen enterotoxin C Staphylococcus aureus reveals a zinc-binding site.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS).
MEDLINE=96027099; PubMed=7582894;
Papageorgiou A.C., Acharya K.R., Shapi:
Brehm R.D., Tranter H.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bacteria; Firmicutes; Bacillus/Clostridium gro
Bacillus/Staphylococcus group; Staphylococcus
NCBI_TaxID=1280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Staphylococcus aureus
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                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: THE DIFFERENT S. AUREUS ENTEROTOXINS AND S. PYOGENES
                                                                                                                                                                                                                                                                                                                                                           PYROGENIC EXOTOXINS ARE ALL RELATED. A60114; A60114.
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                       28
120
36
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145
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Tranter H.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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                                ; Signal; ; 27 266 137 36 110 145
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. 28, Last sequence update)
. 38, Last annotation update)
C-2 PRECURSOR (SEC2).
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    30604
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                                                                                                                              ENTEROTOXIN TYPE C-2
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8407FB18536FAC08 CRC64;
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staphylococcal
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ETC3_S1
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Matches 10
                                                                                                                               DISULFID SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HOVDE C.J., Hackett S.P., Bohach G.A.;
Hovde C.J., Hackett S.P., Bohach G.A.;
"Nucleotide sequence of the staphylococcal enterotoxin C3 gene:
sequence comparison of all three type C staphylococcal
enterotxins.";
                                                                                                                                                                                                                                                                                                                                                                                              EMBL; X51661; CAA35972.1; -. PIR; S11885; S11885.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fields B.A., Malchiodi E.L., Li H., Ysern X., Stauffacher C.V., Schllevert P.M., Karjalainen K., Mariuzza R.A.; "Crystal structure of a T-cell receptor beta-chain complexed with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Staphylococcus aureus.
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.
                                                                                                                                                                                                     SIGNAL
                                                                                                                                                                                                                                                                                                  Pfam; PF01123; Stap_Strp_toxin; PRINTS; PR00279; BACTRLTOXIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -!- DISEASE: STAPHYLOCOCCAL ENTEROTOXINS CAUSE THE INTOXICATION STAPHYLOCOCCAL FOOD POISONING SYNDROME.
-!- SIMILARITY: THE DIFFERENT S.AUREUS ENTEROTOXINS AND S.PYOGENES
                                                                                                                                                                               CHAIN
                                                                                                                                                                                                                              Enterotoxin;
                                                                                                                                                                                                                                                  PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
                                                                                                                                                                                                                                                                                                                      InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
                                                                                                                                                                                                                                                                                                                                                                             PDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                superantigen."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=97064178; PubMed=8906797;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              X-RAY CRYSTALLOGRAPHY (3.5 ANGSTROMS) OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENTC3
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15-JUL-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PYROGENIC EXOTOXINS ARE ALL RELATED.
                                                                                                                                                                                                                                                                                                                                                                     1JCK; 12-NOV-97.
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            10; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genet. 220:329-333(1990).
                                                                                                                             28
120
266 ‡
          Conservative
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(Rel. 20, Last sequence update)
(Rel. 38, Last annotation update)
TYPE C-3 PRECURSOR (SEC3).
                                                                                                                                                                                                   Toxin; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                               AA;
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                                93.1%;
83.3%;
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83.3%;
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          Pred. No. 6.9e
2; Mismatches
                                                                                                                                                                                                                       Superantigen;
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                                                                                                                                                                          ENTEROTOXIN TYPE C-3
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Pred. No. 6.9e-05;
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                                                                                                                             5ED8A32D11FFCA59
                                                                                                                                                   SIMILARITY
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DB 1;
6.9e-05;
0;
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                                                       Length 266
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          Gaps
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CMYGGITKHEGN 148

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21-JUL-1986
13-AUG-1987
15-JUL-1999
ENTEROTOXIN 7
Papageorgiou A.C., Tranter H.S., Acharya K.R.;

"Crystal structure of microbial superantigen staphylococcal enterotoxin B at 1.5-A resolution: implications for superantiger recognition by MHC class II molecules and T-cell receptors.";

J. Mol. Biol. 277:61-79(1998).

1- DISSASE: STAPHYLOCOCCAL ENTENOTOXINS CAUSE THE INTOXICATION STAPHYLOCOCCAL FOOD POISONING SYNDROME.

-1- SIMILARITY: THE DIFFERENT S.AUREUS ENTEROTOXINS AND S.PYOGEN PYROGENIC EXOTOXINS ARE ALL RELATED.
                                                                                                                                                                                                                                                                                                       Jardetzky T.S., Brown J.H., Gorga J.C., Stern Chi Y.I., Stauffacher C., Strominger J.L., Wil "Three-dimensional structure of a human class molecule complexed with superantigen."; Nature 368:711-718(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=93063291; PubMed=1436058; Sax Swaminathan S., Furey W.F. Jr., Pletcher J., Sax Crystal structure of staphylococcal enterotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Molecular cloning of staphylococcal enterotoxin Escherichia coli and Staphylococcus aureus."; Proc. Natl. Acad. Sci. U.S.A. 82:5850-5854(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-85298255, PubMed-3898073;
Ranelli D.M., Jones C.L., Johns M.B., Mussey G.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Staphylococcus aureus.
Bacteria; Firmicutes; Ba
Bacillus/Staphylococcus
NCBI_TaxID-1280;
                                                                                                                         X-RAY CRYSTALLOGRAPHY (1.5 ANGSTROMS).
MEDLINE-98181012; PubMed-9514739;
Papageorgiou A.C., Tranter H.S., Achar
                                                                                                                                                                                   "Three-dimensional structure of the complex between a T cell receptor beta chain and the superantigen staphylococcal enterotoxin B."; Immunity 9:807-816(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "The primary structure of staphylococcal encyanogen bromide peptides of reduced and an B, and the complete amino acid sequence.";
J. Biol. Chem. 245:3518-3525(1970).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 28-266 (S-6)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aureus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-86168029; PubMed-3957869
Jones C.L., Khan S.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ETXB_STAAU P01552;
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                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=94203282; PubMed=8152483;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-71007902;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                Li H., Llera A., Tsuchiya D., Leder L.,
Karjalainen K., Mariuzza R.A.;
                                                                                                                                                                                                                                                             MEDLINE-99096298;
                                                                                                                                                                                                                                                                                                                                                                                                X-RAY CRYSTALLOGRAPHY (2.7 ANGSTROMS) OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Nucleotide sequence
                                                                                                                                                                                                                                                                          X-RAY CRYSTALLOGRAPHY (2.4 ANGSTROMS) OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bacteriol. 166:29-33(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NE=71007902; PubMed=5470821; I.-Y., Bergdoll M.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                              359:801-806(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Rel. 01, Created)
(Rel. 05, Last sequence up
(Rel. 38, Last annotation
TYPE B PRECURSOR (SEB).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                             PubMed=9881971;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of the enterotoxin B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bacillus/Clostridium group; us group; Staphylococcus.
                                                                                                                                                                                                                                                                                                                                                                 Gorga J.C., Stern L.J., Urban R.G.,
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                                                                                                                                                                                                                                               Ysern X.,
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                                                                                                                                                                                                                                                                             COMPLEX WITH
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histocompatibility
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RESULT 5
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Best Local 9
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PDB; 2SEB; 28-JAN-98.
PDB; 3SEB; 27-MAY-98.
PDB; 1SE3; 16-JUN-97.
PDB; 1SE4; 15-CCT-97.
PDB; 1SBB; 04-MAR-99.
InterPro; IPR001961; Staph_Strep_toxin.
PfAm; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PRINTS; PR00279; BACTRLTOXIN.
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CONFLICT
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CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR;
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                                                                                 SEQUENCE FROM N.A.
MEDLINB-86166804; PubMed-3514452;
Weeks C.R., Ferretti J.J.;
"Nucleotide sequence of the type A streptococcal exotoxin (erythrogenic toxin) gene from Streptococcus pyogenes bac
                                                                                                                                                                                                                                                   Bacteria; Firmicutes; Streptococcus.
                                                                                                                                                                                                                                                                                                 Streptococcus pyogenes.
                                                                                                                                                                                                                                                                                                                                                                  EXOTOXIN TYPE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
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         SEQUENCE FROM N.A
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S27360; S27360.
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                                                  Immun. 52:144-150(1986)
                                                                                                                                                                                                                                                                                                                                                                                       (Rel. 08, Created)
(Rel. 13, Last sequence update)
(Rel. 39, Last annotation update)
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91.7%;
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Y -> YY (IN REF. 3).
QE -> EQ (IN REF. 3).
D -> N (IN REF. 3).
DN -> ND (IN REF. 3).
B6D417F61CF018B0 CRC6
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Pred. No.
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QTD -> ENT (IN REF. 3).
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6.9e-05;
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ETXD_STAAU
P20723;
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01-FEB-1991
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PDB; 1B1Z; 24-NOV-99.
InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
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MEDILINE-99094887; PubMed-9878045;

Papageorgiou A.C., Collins C.M., Gutman D.M., Kline J.B.,

O'Brien S.M., Tranter H.S., Acharya K.R.;

"Structural basis for the recognition of superantigen streptococcal pyrogenic exotoxin A (SpeAl) by MHC class II molecules and T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
                                                                                                                                                                                         128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the En
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      receptors
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Johnson L.P., L'Italien J.J., Sch
                                                                                                                                                                                                                                                                                                      Local
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                                                                                                                                                                                    CIYGGVTNHEGN 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MISCELLANEOUS: THIS TOXIN SEEMS TO BE CODED BY BACTERIOPHAGE T12. SIMILARITY: THE DIFFERENT S.AUREUS ENTEROTOXINS AND S.PYOGENES PYROGENIC EXOTOXINS ARE ALL RELATED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISEASE: THE STREPTOCOCCAL PYROGENIC TOXINS A, B, AND C ARE THE CAUSATIVE AGENTS OF THE SYMPTOMS ASSOCIATED WITH SCARLET FEVER, HAVE BEEN ASSOCIATED WITH STREPTOCOCCAL TOXIC SHOCK-LIKE DISEASE AND MAY PLAY A ROLE IN THE EARLY EVENTS OF RHEUMATIC FEVER.
                                                                                                                                                                                                                                CMYGGVTEHEGN 12
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S29659; S29659.
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                                                                                                                                                                                                                                                                                                      Similarity
(Rel. 17, Created)
(Rel. 17, Last sequ
                                                                                                                                                                                                                                                                                                                                                                                                   251 AA;
                                                                                                                                                                                                                                                                                   Conservative
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                                                                    STANDARD;
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STAPH_STREP_TOXIN_2;
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83.3%;
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sequence update)
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                                                                                                                                                                                                                                                                                                  Score 63; DB 1;
Pred. No. 0.00034;
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VT -> MK (IN REF. 2).
SQEVFAQQDPD -> LPKGICSTRPK (IN REF.
H -> Q (IN REF. 2).
S -> N (IN REF. 2).
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Matches 10
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15-JUL-1999
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P13163;
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VARIANT
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METAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR; A33953; A33953.
HSSP; P13163; 1SXT.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Enterotoxin;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=97157473; PubMed=9003758;
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"Genetic and molecular analyses of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacteria; Firmicutes; Bacillus/Clostridium gro
Bacillus/Staphylococcus group; Staphylococcus
NCBI_TaxID=1280;
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                                                                                                                                                                                                                                                                                                                                                           Local Similarity hes 10; Conser
                                                                                                                                                                                                                                                                                       1 CMYGGVTEHEGN 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBUNIT: HOMODIMER; ZINC-DEPENDENT.
DISEASE: STAPHYLOCOCCAL ENTEROTOXINS CAUSE THE INTOXICATION
STAPHYLOCOCCAL FOOD POISONING SYNDROME.
                                                                                                                                                                                                                                                                CTYGGVTPHEGN 142
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(Rel.
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TYPE A
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               . 13, Created)
. 13, Last sequence update)
. 38, Last annotation update)
A PRECURSOR (SEA).
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A; 29746 MW; 4F7C6A28D42597FD CRC64;
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D PRECURSOR (SED).
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83.3%;
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                                                                                                                                                                                                                                                                                                                                                      Score 60; DB 1;
Pred. No. 0.0012;
); Mismatches
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ENTA.

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enterotoxins.'
Nat. Struct. E
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J. Biol. Chem. 271:32212-32216(1996).
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MEDLING-8722293; PubMed-3584106;

Huang I.-Y., Hughes J.L., Bergdoll M.S., Schantz E.J.;

"Complete amino acid sequence of staphylococcal enterotoxin J. Biol. Chem. 262:7006-7013(1987).
                                                                                                                                        use by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                            enterotoxins A and C2 reveals remarkable similarity and dissimilarity.";
                                                                                                                                                                                                                                                                                                                                                                                          Schad E.M., Papageorgiou A.C., Svensson L.A., Acharya K.R., "A structural and functional comparison of staphylococcal
                                                                                                                                                                                                                                                                                                                                                                                                                      COMPARISON OF STRUCTURE OF SEA AND SEC2 MEDLINE-97334373; PubMed-9191070;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3D-STRUCTURE MODELING MEDLINE-96022987; Publ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X-RAY CRYSTALLOGRAPHY (2.7 ANGSTROMS) MEDLINE=97113025; PubMed=8943278;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS).
MEDLINE=95354648; PubMed=7628431;
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                                                                                                                EMBL;
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"Residues defining V beta specificity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "The Co-crystal structure of staphylococcal enterotoxin type A with 2.7-A resolution. Implications for major histocompatibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sundstroem M., Hallen D., Svensson A.,
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NCBI_TaxID=1280;
InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
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Bacteria; Firmicutes;
                                        L; M18970; AAA26681.1;
A28664; A28664.
; A29566; A29566;
; LSSF; 11-JUL-96.
; LSEA; 15-OCT-95.
; LST7; 19-NOV-97.
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ficity in stap
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EMBL;

M21319; AAA26617.1;

PIR; A28179; A28179.

PDB; 1SEE; 15-OCT-95.

InterPro; IPR001961; Staph_Strep_toxin.

PF01123; Stap_Strp_toxin; S; PR00279; BACTRLTOXIN.

or send

PROSITE: PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE: PS00278; STAPH_STREP_TOXIN_2; 1.
Enterotoxin; Toxin; Signal; Superantigen;

3D-structure.

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RESULT OF THE PROPERTY OF THE 
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Matches 9
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P12993;
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SEQUENCE
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METAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Cloning and nucleotide sequence of enterotoxin gene.";
J. Bacteriol. 170:2954-2960(1988).
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DISEASE: STAPHYLOCOCCAL ENTEROTOXINS CAUSE THE INTOXICATION
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                                                                                                                                                                                                               non-profit institutions as long as its content is in no way d and this statement is not removed. Usage by and for commercial s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
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9; Conservative
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(Rel. 13, Last sequence up
(Rel. 38, Last annotation
TYPE E PRECURSOR (SEE).
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STAPH_STREP_TOXIN_2; 1.
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.0097;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J., Sax M.; staphylococcal
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                                                                                                                                          This SWI
                                                                            use by non-profit institutions as long a modified and this statement is not removed. entities requires a license agreement (See
                            PIR; B48826; B48826.
                                         EMBL; M96170; AAA49438.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yasumasu S., Yamada K., Akasaka K., I
Shimada H., Yamagami K.,
"Isolation of CDNAs for LCE and HCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HCE1_ORYLA STANDARD; PRT; 270 AA.

P31580;

01-JUL-1993 (Rel. 26, Created)

01-JUL-1993 (Rel. 26, Last sequence update)

01-NOV-1995 (Rel. 32, Last annotation update)

HIGH CHORIOLYTIC ENZYME 1 PRECURSOR (EC 3.4.24.67) (HATCHING ENZYME ZINC-PROTEASE HCE 1 SUBUNIT) (CHORIOLYSIN H 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei Acanthomorpha; Acanthomorpha; Acanthomorpha; Adrianichthyidae; Oryzinae; Oryzias.
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CHAIN
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hatching enzyme of Oryzias latipes, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=93012471;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A., AND SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=8090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oryzias latipes (Medaka fish).
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                                                                    send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                     s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the Englement Bioinformatics Institute. There are no resti
                                                                                                                                                                                                                                                                                                                         ATT MENAS during development.";

, Biol. 153:250-258(1992).

FUNCTION: PARRICIFIATES IN THE BREAKDOWN OF THE EGG ENVELOPE,
WHICH IS DERIVED FROM THE EGG EXTRACELLULAR MATRIX, AT THE TIME
OF HATCHING. THUS ALLOWING THE NEWLY HATCHED FISH TO SWIM FREE.
HCE BINDS TIGHTLY TO THE EGG ENVELOPE WHILE IT EXERTS THE
CHORIOLYTIC SWELLING ACTION.

CATALYTIC ACTIVITY: HYDROLYSIS OF THE INNER LAYER OF FISH EGG
ENVELOPE. ALSO HYDROLYSES CASEIN AND SWALL MOLECULE SUBSTRATES
SUCH AS SUCLEU-LEU-VAL-TYR-I-MCA.

COFACTOR: BINDS ONE ZINC ION.

COFACTOR: BINDS ONE ZINC ION.
                                                                                                                                                                                                                     DÉVELOPMENTAL STAGE: PRODUCTION OF THE PROTEIN STARTS IN DAY 2 TO DAY 3 EMBRYOS AND INCREASES THEREAFTER UNTIL HATCHING.
PTM: O-GLYCOSYLATED (PROBABLE).
MISCELLANEOUS: IN MEDAKA THE HATCHING ENZYME SYSTEM IS COMPOSED TWO DISTINCT PROTEASES, THE HIGH CHORIOLYTIC ENZYME (HCE), OF WHICH THERE ARE TWO ISOFORMS, AND THE LOW CHORIOLYTIC ENZYME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CMYGGVTEHEGN 12
                                                                                                                                                                             SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12A (ZINC METALLOPROTEASE); ALSO KNOWN AS THE ASTAÇIN SUBFAMILY.
             P07584;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CMYGGVTLHDNN 141
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                                                                                (See http://www.isb-sib.ch/announce/
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Best Local
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"Isolation of cDNAs for LCE and HCE, two constituent proteases of the protease of the control of cDNAs for LCE and HCE, two constituent proteases of the control of cDNAs for LCE and HCE, two constituent proteases of the control of cDNAs for LCE and HCE, two constituent proteases of the control of contro
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=93012471; PubMed=1397682;
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InterPro; IPR000130; Zn_MTpeptdse
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                                                                                 MISCELLANEOUS: IN MEDAKA THE HATCHING ENZYME TWO DISTINCT PROTEASES, THE HIGH CHORIOLYTIC WHICH THERE ARE TWO ISOFORMS, AND THE LOW CHO
                                                                                                                                                                                                                                                                                                                  SUCH AS SUC-LEU-LEU-VAL-TYR-|-MCA.
COFACTOR: BINDS ONE ZINC ION.
SUBCELLULAR LOCATION: STORED AS PR
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HIGH CHORIOLYTIC EN
ZINC (CATALYTIC) (B)
BY SIMILARITY.
ZINC (CATALYTIC) (B)
ZINC (CATALYTIC) (B)
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Pred. No. 0.43;
2; Mismatches
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ZINC (CATALYTIC) (BY SIMILARITY).
N-LINKED (GLCNAC. . . ) (POTENTIAL).
D85C972906E3735A CRC64;
                                                                                                                                                                                                                                                                                                                      AS PROENZYMES

    Glycoprotein; Zymogen; Signal.

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; Neoteleostei;
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SIMILARITY: BELONGS METALLOPROTEASE); AI

ALSO

) KNOWN AS T

THE ASTACIN SUBFAMILY FAMILY M12A

ENZYME SYSTEM

IS COMPOSED (HCE) ENZYME

of G

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SEQUENCE
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01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
HYPOTHETICAL PROTEIN IN CCCA 5 REGION (FRAGMENT).
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                                                                                                                                                                        MEDLINE=93379042; PubMed=7916623; Fujlwara Y., Oka M., Hamamoto T., Sone N.; "Cytochrome c-551 of the thermophilic bacterium PS3, DNA sequenc analysis of the mature cytochrome."; Blochim. Blophys. Acta 1144:213-219(1993).

-1- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN (POTENTIAL).
-1- SIMILARITY: TO B.SUBTILIS YPJC, YQFU AND YITT.
                                                                                                                                                                                                                                                                                                                           Bacillus PS3 (Thermophilic bacterium PS-3). Bacteria; Firmicutes; Bacillus/Clostridium group;
                                                                                                                                                                                                                                                                                                                                                                                                                                           BACP3
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                                                                 entities re
or send an
                                                                                                                                                This
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NCBI_TaxID=70306;
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                      EMBL; X63125; -; NOT_ANNOTATED_CDS.
Hypothetical protein; Transmembrane
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            Hypothetical
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InterPro; IPR000130; Zn_MTpeptdse.
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                                                          European Bioinformatics Institute. The by non-profit institutions as long ilfied and this statement is not removed. Steles requires a license agreement (See send an email to license@isb-slb.ch)
                                                                                                                            SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EB Furonean Bioinformatics Traffitute There are no restricted.
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BY SIMILARITY.

ZINC (CATALYTIC) (BY SIMILARITY).

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ZINC (CATALYTIC) (BY SIMILARITY).

N-LINKED (GLCARC. . .) (POTENTIAL).

MW; 00244107ABB01BBC CRC64;
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; Glycoprotein; Zymogen;
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RESULT 12
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Matches 7
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between
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Witteking M., Goerlach M., Friedrichs M., Dreyfuss G., Mueller L.; "1H, 13C, and 15N NMR assignments and global folding pattern of the RNA-binding domain of the human hnRNP C proteins."; Biochemistry 31:6254-6265(1992).
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01-AUG-1991 (Rel. 19, Last seg
20-AUG-2001 (Rel. 40, Last ann
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P07910; P22628;
01-AUG-1988 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Primary structure differences between proteins C1 and nuclear ribonucleoprotein particles."; Nucleic Acids Res. 17:8441-8449(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Primary structure of human nuclear ribonucleoprotein particle C proteins: conservation of sequence and domain structures in heterogeneous nuclear RNA, mRNA, and pre-rRNA-binding proteins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-87257872; PubMed-3110598; Swanson M.S., Nakagawa T.Y., Levan K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
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"Interaction of the RNA-binding domain of the hnRNP C
                                                                                                                                                                                                                                                                                                                                                                                                          STRUCTURE BY NMR OF 1-94. MEDLINE=92371436; PubMed=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRUCTURE BY NMR OF 1-94.
MEDLINE=92329450; PubMed=1385725;
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                                                                                                                                                                                                                                                                                                   ЕМВО J. 11:3289-3295(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     heterogeneous nuclear RNA, mRNA, an
Mol. Cell. Biol. 7:1731-1739(1987).
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                                                                                                                                   FUNCTION: MAY PLÂY À ROLE IN RIBONUCLEOSOME ASSEMBLY BY
NEUTRALIZING BASIC PROTEINS SUCH AS AND B CORE HURNP,
SUBCELLULAR LOCATION: NUCLEAR; COMPONENT OF RIBONUCLEOSOMES
ALTERNATIVE PRODUCTS: 2 ISOFORMS; C1 AND C2 (SHOWN HERE); AI
PRODUCED BY ALTERNATIVE SPLICING.
PTM: PHOSPHORYLATED (PROBABLE).
                                                                                                             SIMILARITY: CONTAINS 1 RNA RECOGNITION MOTIF (RRM).
  SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
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NUCLEAR RIBONUCLEOPROTEINS C1/C
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RESULT
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Best Local :
                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                            Submitted (NOV-1995) to the EMBL/GenBank/DDBJ databases.
-!- CATALYTIC ACTIVITY: A PHOSPHOPROTEIN + H(2)O = A PROTEIN +
ORTHOPHOSPHATE (THIS ENZYME IS SERINE/THREONINE SPECIFIC).
-!- SIMILARITY: BELONGS TO THE PPP FAMILY OF PHOSPHATASES. PP-1
                            WormPep; C23G10.1; CE01808
                                        EMBL; U39851; AAA81073.1; -. HSSP; P08129; 1FJM.
                                                                                                                                                                                                                                                                                                                                                                                          P48459;
01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-FEB-1996 (Rel. 33, Last annotation update)
PUTATIVE SERINE/THREONINE PROTEIN PHOSPHATASE C23G10.1 IN CHROMOSOME
II (EC 3.1.3.16).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _CAEEL
               InterPro;
                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Rhabditidae; Pelode:
                                                                                                                                                                                                                                                                            Latreille P.
                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                         Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMAKI; DEVOLUTION REM; 1.
PROSITE; PS50102; RRM; 1.
PROSITE; PS00030; RRM_RRP_1; 1.
PROSITE; PS00030; RRM_RRP_1; 1.
PROSITE: PS00030; RRM_RRP_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Aarhus/Ghent-2DPAGE; 7207; IEF. MIM; 164020; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00076; rrm; 1.
SMART; SM00360; RRM; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; M29063; AAA36576.1; -.
EMBL; M16342; AAA52680.1; -.
PIR; C34504; C34504.
PIR; A26885; A26885.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SWISS-2DPAGE; P07910; HUMAN.
Aarhus/Ghent-2DPAGE; 7207; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000504;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     104 MYGSVTEH 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
nes 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 MYGGVTEH 9
                                                                                                                                                                                                       SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _CAEEL
IPR000934; Ser_thr_phosphtse
IPR001394; UCH-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                303 AA;
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                                                                                                                                                                                                                                                                                                                                                Peloderinae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           87
161
303
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87.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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Pred. No. 5
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NUCLEAR LOCALIZATION SIGNAL (POTENTIAL).

ASP/GLU-RICH (ACIDIC).

MISSING (IN ISOFORM HNRNP C1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
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5.8;
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RESULT 14
YGIO_ECOLI
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Best Local S
Matches 5
                      EMBL; U28377; AAA69183.1; ALT_FRAME.
EMBL; U28377; AAA69184.1; ALT_FRAME.
EMBL; AE000383; AAC76052.1; ALT_FRAME.
EMBL; AE000383; AAC76051.1; ALT_FRAME.
EMBL; AE000383; AAC76051.1; ALT_FRAME.
                                                                                                       use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                               Rudd K.E.;
Unpublished observations (JUN-1999).
-!- SIMILARITY: TO M.JANNASCHII MJ1155. ALSO SOME SIMILARITY TO
                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN-K12 / MG1655;
MEDLINE-97426617; PubMed-9278503;
MEDLINE-97426617; PubMed-9278503;
Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V.,
Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Mayhew G.F.,
Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F.,
Gregor T. Davie n. Vides J., Glasner J.D., Rode C.K., Mayhew G.F.,
                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                              "The complete genome sequence of Science 277:1453-1474(1997).
                                                                                                                                                                                                                                                                                                                                                                           Gregor J., Davis N.W., Kirkpatrick H.A., Mau B., Shao Y.;
                                                                                                                                                                                                                                                                                                                   CONCEPTUAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YGIQ_ECOLI STANDARD; PRT; 739 AA. Q46861; Q46862; Q46862; Q46862; Q1-NOV-1997 (Rel. 35, Created) 20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) HYPOTHETICAL 83.5 KDA PROTEIN IN METC-SUFI INTERGENIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         METAL
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bacteria; Proteobacteria;
Escherichia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Escherichia coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YGIQ OR B3015/B3016.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=562;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00125; SER_THR_PHOSPHATASE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00149; STphosphatase; Pfam; PF00442; UCH-1; 1.
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- CAUTION: THIS I
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                                                                                                                                                                                                                                                                                                                     TRANSLATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           l protein; H
191 193
193 193
221 221
253 253
254 254
305 305
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                                                                                                                                                                                                                            IS A CONCEPTUAL TRANSLATION; POSITION 319 TO PRODUCE THIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STPHPHTASE.
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55.6%;
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IRÓN (BY SIMÍLARÍTY).
IRÓN (BY SIMÍLARITY).
IRÓN AND MANGANESE (BY SIMÍLARITY).
GENERAL ACID (BY SIMÍLARITY).
MANGANESE (BY SIMÍLARITY).
MANGANESE (BY SIMÍLARITY).
MANGANESE (BY SIMÍLARITY).
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Pred.
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                                                                                                                                                                                                                                                                                                                                                            Escherichia coli K-12.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
8.7;
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                                                                                                                                                                                                                              ORF.
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                                                                                                                                                                                                                                             A FRAMESHIFT WAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 455
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                                                                                                                                         in no way commercial
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Hypothetical protein; SEQUENCE 739 AA; 8

83503 MW;

proteome.
ECE565EC8915384A CRC64;

Complete

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Query Match
Best Local Similarity
""" 1; Conserve
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Best Local Similarity
""" hes 6; Conserve
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-CV. MOREX; TISSUE-Aleurone;

STRAIN-CV. MOREX; TISSUE-Aleurone;

MEDLINE-96178863; PubMed-8616248;

Tibbot B.K., Skadsen R.W.;

"Molecular cloning and characterization of a gibberellin-inducible,

"Molecular cloning and characterization of a gibberellin-inducible,

putative alpha-glucosidase gene from barley.";

Plant Mol. Biol. 30:229-241[1996).

-1- CATALYTIC ACTIVITY: HYDROLYSIS OF TERMINAL, NON-REDUCING

1.4-LINKED D-GLUCOSE RESIDUES WITH RELEASE OF D-GLUCOSE.

-1- TISSUE SPECIFICITY: HIGH LEVELS SEEN IN THE ALEURONE AND SCUTELLUM

AFTER GERMINATION, WHILE LOW LEVELS ARE FOUND IN DEVELOPING SEEDS.

-1- DEVELOPMENTAL STACE: LEVELS INCREASE STEADILY THROUGHOUT

IMBIBITION REACHING MAXIMUM LEVELS AT DAY 7. DURING GERMINATION,

LEVELS INCREASE FROM DAY 2, REACH MAXIMUM LEVELS AT DAY 3 AND

DECLINE ACTES DAY 5.
                                                                                                                               CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                          EMBL: U22450; AAB02985.1; -.
InterPro; IPR000322; Glyco_hydro_31.
Pfam; PF01055; Glyco_hydro_31; 1.
PROSITE; PS00129; GLYCOSYL_HYDROL_F31_1; 1.
PROSITE; PS00707; GLYCOSYL_HYDROL_F31_2; 1.
Hydrolase; Glycosidase; Glycoprotein; Signal
SIGNAL 1 23 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                          the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/anor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hordeum vulgare (Barley).

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
Triticeae; Hordeum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
ALPHA-GLUCOSIDASE PRECURSOR (EC 3.2.1.20) (MALTASE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGLU_HORVU
Q43763;
                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=4513;
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 3 YGCVTEHE 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DECLINE AFTER DAY 5.
INDUCTION: BY GIBBERELLIN A3 (GA).
SIMILARITY: BELONGS TO FAMILY 31 OF GLYCOSYL HYDROLASES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                  24
437
191
298
338
338
391
471
877
                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
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                                            55.6%;
87.5%;
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877
437
191
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338
3391
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                                                                                                                96933 MW;
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                                                                                                           ALPHA-GLUCOSIDASE.

BY SIMILARITY.

N-LINKED (GLCNAC. .) (POTENTIAL).

N-LINKED (GLCNAC. .) (POTENTIAL).
                              Score 40; DB 1;
Pred. No. 17;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
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Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
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                                                                                                                                                                                                                                                                         Signal.
                                                                                                                                                                                                                                                                                                                                                                                                           moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
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                                                             Length 877;
                                Indels
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Db 481 YGGVTEYE 488
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Search completed: January 2, 2002, 20:50:15 Job time: 210 sec

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Result
No.
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Maximum Match 10
Listing first 45
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Maximum DB
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Perfect score:
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  110
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Gapop 10.0 ,
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sp_bacteria:*
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sp_virus:*
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18.943 Million cell updates/sec
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0524738 streptococc
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ALIGNMENTS

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RESULT 2
Q9R5X4
ID Q9R5X4
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REPORT N.A.
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Best Local (
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Q99T49;
Q1-JUN-2001 (TrEMBL)
Q1-JUN-2001 (TREMBL)
Q1-JUN-2001 (TREMBL)
Q1-JUN-2001 (TREMBL)
ENTEROTOXIN YENT2.
YENT2 OR SA1644.
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Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.
NCBI_TaxID-158879;
                                                                                                                                                                                                                                                                                                                  1 CMYGGVTEHEGN 12
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11; Conserv
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(TremBLrel. 17, Last ann
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          PRELIMINARY;
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91.7%;
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Last annotation update)
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Pred. No. 4.7e-05;
          PRT;
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Best Local S
Matches 10
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O05157;
O1-JUL-1997 (TIEMBLrel. 04, Created)
O1-JUL-1997 (TIEMBLrel. 04, Last sequence update)
O1-JUL-1997 (TIEMBLrel. 17, Last annotation update)
TYPE C ENTEROTOXIN (FRAGMENT).
Staphylococcus intermedius.
Bacteria, Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.
(NCBI_TaxID-1285;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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Best Local :
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01-MAY-2000
01-MAY-2000
01-JUN-2001
  Q53678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPRO01961; Staph_Strep_toxin.
Pfam; PF01123; StapL_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
SEQUENCE 234 AA; 27122 MW; D6A7B45FB9810052 CRC64;
                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                            EMBL; U91526; AAB50248.1; HSSP; P23313; 1JCK.
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MEDLINE-94325995; PubMed-8049778;

Wan den Bussche R.A., Lyon J.D., Bohach G.A.;

Mol. Phylogenet. Evol. 2:281-292(1993).

HSSP; P34071; 15E2.
                                                                                                                                                                                                 PROSITE;
                                                                                                                                                                                                           PROSITE;
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01-MAY-2000 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
ENTEROTOXIN-PYROGENIC TO
                                                                                                                                                                                            InterPro: IPR001961; Staph_Strep_toxin.
Pfiam: Pf01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BAGTRLTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1;
PROSITE; PS00278; STAPH_STREP_TOXIN_2;
NOW TEEP
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                                                                                                                        Similarity
                                                                                                                                                                         239 AA;
  PRELIMINARY;
                                                                                                            Conservative
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1. 17, Last annotation u
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17, Last annotation update)
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Pred. No.
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MEDIINE-94011313; PubMed-8406814;

MARY J.C., Lyon J.D., Roberson J.R., Lupher M., Bohach G.A.;

MARY J.C., Lyon J.D., Roberson J.R., Lupher M., Bohach G.A.;

"Characterization of novel type C staphylococcal enterotoxins:

"I infect. Immun. 61:4254-4262(1993).

In fect. Immun. 61:4254-4262(1993).

EMBL; L13376; BAA26620.1;

REMBL; L13376; BAA
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Best Local
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NON_TER
SEQUENCE 23
                                                                                        Pfam; Pf01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1;
PROSITE; PS00278; STAPH_STREP_TOXIN_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q06531 PRELIMINARY; PRT; 239 AA. Q06531; 01-NOV-1996 (TIEMBLrel. 01, Created) 01-NOV-1996 (TIEMBLrel. 01, Last sequence update) 01-JUN-2001 (TIEMBLrel. 17, Last annotation update) ENTEROTOXIN TYPE C-4 (SEC4446) (FRAGMENT).
                                    Enterotoxin; NON_TER
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Bacteria; Firmicutes; Bacillus/Glostridium group;
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01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-JUN-2001 (TrEMBLrel. 17,
ENTEROTOXIN (FRAGMENT).
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NCBI_TaxID=1280;
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      239 AA;
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                                                              Toxin; Superantigen.
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Last annotation update)
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   BB7BD6204731ED24 CRC64;
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                                                                                                                                                                                                                                                                                                                                                    S. PYOGENES
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Best Local Similarity
Matches 10; Conser
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Best Local :
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                                                                                                                                                                                                                                                                  InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1;
PROSITE; PS00278; STAPH_STREP_TOXIN_2;
Enterotoxin; Toxin; Superantigen.
NON_TER
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STRAIN-MNCOPELAND; MEDLINE-94011313; PubMed-8406814; MEDLINE-94011313; PubMed-8406814; Marr J.C., Lyon J.D., Roberson J.R., Lupher M., Bohach "Characterization of novel type C staphylococcal enterc biological and evolutionary implications.";
                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
ENTEROTOXIN TYPE C (SECCOPELAND) (FRACMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q06533;
Q06533;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Staphylococcus aureus.
Bacteria: Firmicutes: Bacillus/Clostridium group:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-UN-2001 (TrEMBLrel. 17, Last annotation update)
ENTEROTOXIN TYPE C-7 (SEC740N) (FRAGMENT).
                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27642 MW; C77009F46BC8D645 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 67; DB 2;
Pred. No. 0.00021;
2; Mismatches 0
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Pred. No. 0.00021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
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                                               enterotoxins:
                                                                                  G.A.;
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Query Match
Best Local
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Best Local Similarity
                                                         Matches
                                                                                                                                                                          PYROGENIC EXOTOXINS ARE ALL RELATED.
EMBL; L13379; AAA26623.1; -.
HSSP; 934071; ISE2.
InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Staph_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q06534
Q06534;
Q1-NOV-1996
Q1-NOV-1996
Q1-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1996 (TremBLrel. 01, Created)
01-NOV-1996 (TremBLrel. 01, Last sequence update)
01-JUN-2001 (TremBLrel. 17, Last annotation update)
ENTEROTOXIN TYPE C (SECOVINE) (FRAGMENT).
Staphylococcus aureus.
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.
NCBI_TaxID-1280;
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SEQUENCE
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Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
                                                                                                                                 Enterotoxin; Toxin; Superantigen.
NON_TER 1 1 1
SEQUENCE 239 AA; 27517 MW; F3
                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE-94011313; Pubmed-8406814;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Infect. Immun. 61:4254-4262(1993).
-!- DISEASE: STAPHYLOCOCCAL ENTEROTOXINS CAUSE THE INTOXICATION
110
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CMYGGITKHEGN
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                                                          Conservative
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                                                                      93.1%;
83.3%;
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83.3%;
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Pred. No. 0.
                                                                         Score 67; [Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                    F354742619C8D196 CRC64;
                                                         Mismatches
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RA MATY J.C., Lyon J.D., Roberson J.R., Lupher M., Bohach G.A.;

RA MATY J.C., Lyon J.D., Roberson J.R., Bohach G.A.;

RT Marr J.C., Lyon J.D., Roberson J.R., Bohach G.A.;

RT Characterization of novel type C staphylococcal enterotoxins:

RT Diological and evolutionary implications.";

RI Infect. Immun. 61:4254-4262(1993).

CC :- SIMING SYNDROME.

CC :- SIMILARITY: THE DIFFERENT S. AUREUS ENTEROTOXINS AND S. PYOGENES

CC :- SIMILARITY: THE DIFFERENT S. AUREUS ENTEROTOXINS AND S. PYOGENES

CC :- SIMILARITY: THE DIFFERENT S. AUREUS ENTEROTOXINS AND S. PYOGENES

CC :- SIMILARITY: THE DIFFERENT S. AUREUS ENTEROTOXINS AND S. PYOGENES

CC EMBL; L13377; AAA26621.1; --

DR HSSP; P23313; 1JCK.

DR HSSP; P23313; 1JCK.

DR HSSP; P23313; Staph_Strep_toxin.

DR PFAm; FF01123; Staph_Strep_toxin.

DR PROSITE; P800279; STAPH_STREP_TOXIN_1; 1.

DR PROSITE; P800279; STAPH_STREP_TOXIN_2; 1.
           Query Match
Best Local Similarity
Matches 10; Conserv
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Best Local
                                                                                                                                      "Characterization of a putative pathogenicity island from bovine Staphylococcus aureus encoding multiple superantigens.";
J. Bacteriol. 183:63-70(2001).
EMBL; APC17235; AAG29599.1;
InterPro: IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRITOXIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9F0L6;
01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
STAPHYLOCOCCAL ENTEROTOXIN C-BOVINE.
                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                 MEDLINE=20566668; PubMed=11114901; Fitzgerald J.R., Monday S.R., Fost Meaney W.J., Smyth C.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Staphylococcus aureus.
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.
                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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Staphylococcus aureus; Bacillus/Clostridium gro
Bacteria; Firmicutes; Bacillus/Clostridium gro
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01-NOV-1996
01-NOV-1996
01-JUN-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10; Conservative
                                                                                                                          271 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              239 AA;
           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                          31267 MW;
                              93.1%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27648 MW;
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Last sequence update)
Last annotation update)
                              Score 67;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 67; I
                                                                                                                                                                                                                                                                                                                      Foster T.J., Bohach G.A., Hartigan P.J.,
                                                                                                                       3493F6228B042F10 CRC64;
       Mismatches
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       0;
                                                 Length 271;
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       Indels
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Bessen D.E., Izzo M.W., Fiorentino T.R. Hollingshead S.K., Beall B.; "Genetic Linkage of exotoxin alleles ar tropism in group A streptococci."; Submitted (MAR-1998) to the EMBL/GenBar EMBL, AF055698; AAD11624.1; -. HSSP: P08095; IB1Z
                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
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01-MAY-2000 (
01-MAY-2000 (
01-JUN-2001
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NON_TER 1 1 1
NON_TER 22 22
SEQUENCE 222 AA.
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Q9S5Z4;
01-MAY-2000
InterPro; IPR001961; Staph_Strep_toxin
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
                                                                                                                                                         Bacteria; Firmicutes;
Streptococcus.
                                                                                                                                                                               Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bessen D.E., Izzo M.W., Fiorentino T.R., "Genetic linkage of exotoxin alleles and tropisms in group A streptococci."; Submitted (OCT-1997) to the EMBL/GenBank/EMBL; AF029051; AAD21315.1; - HSSP; P08095; 1B1Z.
                                                                                                             STRAIN-D709;
                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                            Q9R931
                                                                                                                                              NCBI_TaxID=1314;
                                                                                                                                                                                            SPEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF01123; Stap_Strp_toxin; PRINTS; PR00279; BACTRLTOXIN. PROSITE; PS00277; STAPH_STREP_TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Interpro; IPR001961; Staph_Strep_toxin.
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Bacteria; Firmicutes; E
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01-JUN-2001
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(FRAGMENT).
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83
                                                                                                                                                                   Bacillus/Clostridium
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13,
17,
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                                                                                                 Fiorentino T.R.,
                                                       EMBL/GenBank/DDBJ
                                                                                                                                                                                                             Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                             1;
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Pred. No.
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Last annotation update)
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                                                                                                                                                                                                                                                            PRT;
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                                                                                                Caringal R.M.,
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                                                                                                                                                                   group; Streptococcaceae;
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                                                                                                                                                                                                              update)
                                                                           gene markers
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tissue
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RESULT OF STANDARD PRINTERS OF
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Best Local :
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Best Local !
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NON_TER
SEQUENCE
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PROSITE;
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SEQUENCE
SPEA.
Streptococcus pyogenes
Bacteria; Firmicutes; 1
                                                              Q54779 PRELIMINARY; PRT; 236 AA. Q54779; Q54613; Q54716; Q54740; Q54741; Q1-NOV-1996 (TrEMBLrel. 01, Creat sequence update) Q1-UNV-1996 (TrEMBLrel. 01, Last sequence update) Q1-JUN-2001 (TrEMBLrel. 17, Last annotation update) TYPE A EXOTOXIN PRECURSOR (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       054696 PRELIMINARY; PRT; 236 AA. 054696; 01-NOV-1996 (TrEMBLrel. 01, Created) 01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-JUN-2001 (TrEMBLrel. 17, Last annotation update) TYPE A EXOTOXIN PRECURSOR (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene encoding pyrogenic exotoxin A (scarlet fever toxin)
Streptococcus pyogenes.";
J. Exp. Med. 174.1271-1274(1991).
EMBL; X61573; CAA43771.1;
HSSP; P08095; IBIZ.
InterPro; IPR001961; Staph_Strep_toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Streptococcus.
NCBI_TaxID=1314;
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Streptococcus pyogenes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam: PF01123; Stap_Strp_toxin; 1.
PRINTS: PR00279; BACTRLTOXIN.
PROSITE: PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE: PS00278; STAPH_STREP_TOXIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nelson K., Schlievert P.M., Selander R.K., "Characterization and clonal distribution of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=92044323; PubMed=1940804;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-MGAS156;
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20 CIYGGVTNHEGN 131
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                                                                                                                                                                                                                                                                                                                                                                     10; Conservative
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222
222 AA;
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83.3%;
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83.3%;
  Bacillus/Clostridium group; Streptococcaceae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ME;
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1; Mismatches
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Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE A EXOTOXIN.
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ir alleles of '
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gene encoding pyrogenic exotoxin A (scarlet fever toxin) in Streptococcus pyogenes.";
RI J. Exp. Med. 174:1271-1274(1991).
DR EMBL; X61563; CAA43760.1; -.
DR EMBL; X61567; CAA43751.1; -.
DR EMBL; X61567; CAA43751.1; -.
DR EMBL; X61567; CAA43759.1; -.
DR EMBL; X61567; CAA43763.1; -.
NR EMBL; X61565; CAA43763.1; -.
NR 
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Best Local S
Matches 10
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"Characterization and clonal distribution of four alleles of
gene encoding pyrogenic exotoxin A (scarlet fever toxin) in
Streptococcus pyogenes.";

J. Exp. Med. 174:1271-1274(1991).

EMBL; X61569; CAA43770.1; -.

EMBL; X61572; CAA43770.1; -.

EMBL; X61570; CAA43770.1; -.

EMBL; X61570; CAA43766.1; -.

EMBL; X61570; CAA43768.1; -.

EMBL; X61570; CAA43769.1; -.

R EMBL; X61570; CAA4376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q57453;
Q57453;
Q1-NOV-1996;
Q1-NOV-1996;
Q1-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIGNAL
CHAIN
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SPEA.
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
TYPE A EXOTOXIN PRECURSOR (FRAGMENT).
InterPro: IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSTTE; PS00277; STAPH_STREP_TOXIN_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-92044323; PubMed-1940804;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Streptococcus pyogenes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Signal.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Streptococcus.
NCBI_TaxID=1314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=1314;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120 CIYGGYTNHEGN 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CMYGGVTEHEGN 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 83.:
10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              236 AA;
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83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bacillus/Clostridium group; Streptococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 63; DB 2;
Pred. No. 0.0011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
TYPE A EXOTOXIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29DF2AD575623A84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGAS491,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AND
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Result
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run
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                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being puand is derived by analysis of the total score distribution.
                                                                                                                                                                                                                           Score
   Query
Match
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| SIDS2/gcgdata/geneseq/yeneseqp/AA1981.DAT:*
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| SIDS2/gcgdata/geneseq/yeneseqp/AA1983.DAT:*
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| SIDS2/gcgdata/geneseq/geneseqp/AA1993.DAT:*
| SIDS2/gcgdata/geneseq/geneseqp/AA1995.DAT:*
| SIDS2/gcgdata/geneseq/geneseqp/AA1995.DAT:*
| SIDS2/gcgdata/geneseq/geneseqp/AA1997.DAT:*
| SIDS2/gcgdata/geneseq/geneseqp/AA1999.DAT:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
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112
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                                   AAW72422
AAY97838
AAY97846
AAY72184
AAW72184
AAW72424
AAW72424
AAW7217840
AAW7217840
                     AAY97842
                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search time 77.31 Seconds (without alignments)
11.498 Million cell updates/sec
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                                 Peptide from regio
Peptide #3 for red
Staphylococcal/str
Peptide #6344, der
Peptide #5 for red
                                                                                                                                                                                                                           Description
Staphylococcal/str
Peptide #6347, der
                                                                                                                                                 Staphylococcus aur
                                                                                                                                                                  Peptide #1 for red
Staphylococcal/str
                                                                                                                               Peptide #6343,
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                                                                                                                                 der
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45	44	43	42	41	40	39	38	37	36	<u>ა</u>	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12 .
62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
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22	21	21	18	18	14	12	22	14	12	20	17	22	22	21	21	21	22	20	20	20	20	20	20	20	20	14	12	22	14	12	22	21	19
7	54	701	M067	AAW35373	5	AAR13203	AAB67339	AAR45012	AAR13204	AAW73919	AAW04492		AAY72182	AAY97848	AAY97844	AAY70108	AAB67342				AAY06258				AAY06254	AAR45015	ᆵ	~	L.D.	13	72	AAY97843	AAW7 24 27
Staphylococcus aur	Amino acid sequenc	Mutant Staphylococ	Staphylococcus ent	Staphylococcus ent	Staphylococcal ent	_	ococcus.		ococcal	Staphylococcal ent	cocca	Peptide from regio	Peptide from regio	coccus	coccus	taphylococcal	Staphylococcus aur		taphylococcal		taphylococcal		Staphylococcal gro			lococcal	Staphylococcal ent	lococcus	Lococcal	taphylococcal en	eptide #6348,	occa	eptide #6 for re

ALIGNMENTS

RESULT

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AAW72422;

AAW72422 standard; peptide;

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22-DEC-1998

(first entry)

Peptide #1 for reducing symptoms of toxic shock syndrome

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AAW72422
ID AAW7
XX AAW7
XX AAW7
AC AAW7
XX Pept
XX Pept
XX Toxi
KW Toxi
KW Stap
KW Stap
KW Autc
XX Synt
OS Staf
OS Staf
OS Staf
ON WO98
XX WO98
PN WO98
XX O7-4
PR O7-4
PR O7-4
PR O7-4
PR O7-7
PR O7-7
PR O7-7
PR O7-7
PR O8-7
PR WPI:
New
PT New
                                                                                                                                                                                                  Synthetic.
Staphylococcus sp.
Streptococcus sp.
                                                                                                                                                                                                                                                autoimmune disease.
                                                                                                                                                                                                                                                         Toxic shock syndrome; immunogenic response; bacterial infection; staphylococcal enterotoxin; streptococcal pyrogenic toxin; antibody;
                                  WPI; 1998-568335/48.
                                                         Bannan
                                                                                                       07-APR-1997;
                                                                                                                             01-APR-1998;
                                                                                                                                                                             W09845325-A1
                                                                                (UYRQ ) UNIV ROCKEFELLER.
                                                                                                                                                     15-OCT-1998
                                                         Zabriskie JB;
                                                                                                       97US-0838413
                                                                                                                             98WO-US06663
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New peptides that generate antibodies against staphylococcal and streptococcal toxins - used to diagnose, treat or prevent toxic

shock and autoimmune diseases

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The invention relates to novel peptides (AAY97838-Y97843) comprising
                                 Claim 4; Page 88; 115pp; English.
                                                                   Peptides useful for preventing and reducing the symptoms of toxic shock syndrome and septic shock from staphylococcal and streptococcal infections -
                                                                                                                                                             Bannan JD, Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            staphylococcal enterotoxin (SE) or streptococcal endotoxin (SPE). Ab are used: (1) for diagnostic detection of SPEA or SEB and SED, in usual immunoassays; (ii) to inhibit blastogenesis of human mononuclear cells in presence of these toxins (i.e. to protect against or alleviate toxic shock or autoimmune disease associated with bacterial infections);
                                                                                                                                                                                                                          07-OCT-1998;
18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                       WO200020598-A1.
                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
Staphylococcus aureus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and (iii) for passive immunisation against effects of the toxins. The peptides generate Ab that are cross-reactive with toxins from a variety of bacteria. The present sequence represents a specifically claimed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X1, X8, X13 and X24 = L, I or V; X3, X25 and X26 = any amino acid (aa) or are absent; X27 = L or Y; all other X may be any aa. The peptides can be used to generate serum antibodies (Ab) that bind at least one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes peptides having consensus sequences #1 or #2, optionally as part of a larger molecule of size at least 6-8 kD where consensus sequence #1 and #2 are: x25x26YG6X1TXXXX4X5N #1. Where KX6XXX8X9X.0X11X12X13DX14X15X16RX17X18X27X19X20X21X22X23X24Y #2, where
                                                                                                                                                                                            (UYRQ ) UNIV ROCKEFELLER.
                                                                                                                                                                                                                                                                        24-SEP-1999;
                                                                                                                                                                                                                                                                                                        13-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                Pyrogenic exotoxin; enterotoxin; streptococcal infection; staphylococcal infection; septic shock; toxic shock; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Staphylococcal/streptococcal pyrogenic toxin-derived peptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY97838 standard; peptide; 12 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  example of a peptide of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CMYGGVTLHEGN 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                          98US-0168303
99US-0335581
                                                                                                                                                                                                                                                                        99WO-US22180
                                                                                                                                                                                                                                                                                                                                                                     'Group A'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90.18;
91.78;
                                                                                                                                                             Zabriskie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
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Pred. No. 7.1e-05;
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           staphylococcal enterotoxin or streptococcal exotoxin and both the peptides and antibodies can be used in diagnostic assays to aid in the diagnosts of disease related to the presence of bacterial toxins. Nuclei acids encoding a peptide of the invention can be used for the production of the peptides for diagnostic reagents, as vaccines and for therapies for pyrogenic exotoxin related diseases. Vectors expressing high levels of the peptides can be used in immunotherapy and immunoprophylaxis when expressed in humans. The antibodies are used for passive immunisation thereapy and the control of the peptides can be used in immunotherapy and immunoprophylaxis when
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    exotoxins) constitute a family of structurally related toxins which share similar biological activities. They stimulate CD4+, CD8+ and gamma-delta+ T-cells by binding the beta-chain variable region (V-beta) elements on the lateral face of the T-cell receptor (TCR) while simultaneously binding the lateral face of the class II major histocompatibility complex (MHC) of antigen presenting cells. This causes aberrant proliferation of T-cells, which stimulates other components of the immune system, causing injury to the host. The peptides are used to prevent, treat or protect against toxic shock and septic shock resulting from bacterial infections in mammals, particularly humans. The peptides are used for inducing serum antibodies that bind at least one starballocomes are starballocomes and service and both the
                        Staphylococcal infection; enterotoxin; septic shock; toxic shock;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        therapy to prevent or increase resistance to toxic shock syndrome or septic shock and to ameliorate the effects of conditions associated with the presence of staphylococcal or streptococcal pyrogenic toxins. The amino acid sequences of the peptides are sufficiently common that they can be used for eliciting antibodies which are cross-reactive with toxins derived from various bacteria. Sequences AAY97838-Y978343 represent the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                consensus amino acid sequence derived from two conserved regions (regions 1 and 2) of Staphylococcus aureus enterotoxins and streptococcal pyrogenic toxins. Consensus region 1a (a preferred consensus region 1) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N consensus region 2) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N consensus region 2) has
                                                                            Staphylococcus aureus enterotoxin SEC, conserved region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic peptides based on consensus consensus regions 1 and 2 of Staphylococcus aureus and Group A streptococcal pyrogenic toxins. These peptides can be administered to a mammal to raise serum antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention also relates to serum antibodies induced by the peptides which provide protection against, or reduce the severity of toxic shoc and septic shock caused by the staphylococcal and streptococcal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  X9-X10-X11-X12-X13-D-X14-X15-X16-R-X17-X18-X27-X19-X20-X21-X22-X23-X24-Y (AAY97864), where: X1, X8, X13 and X24 are each independently selected from L, I and V; X2, X4, X5, X6, X7, X9, X10, X11, X12, X14, X15, X16, X17, X18, X19, X20, X21, X22 and X23 are each independently selected from the group consisting of any amino acid; X3, X5 and X26 are each independently selected from the group consisting
                                                                                                                               29-AUG-2000
                                                                                                                                                                                   AAY97846
                                                                                                                                                                                                                                 AAY97846 standard; peptide; 12 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for protection against or amelioration of toxic or septic shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pyrogenic toxins.
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                                                                                                                                                                                                                                                                                                                                                                                                                    1 CMYGGVTLHEGN 12
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                                                                                                                                                                                                                                                                                                                                                                    cmyggvtehegn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
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                                                                                                                               (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 90.1%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 64; DB 21;
Pred. No. 7.1e-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .1e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 12
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vaccine; antibody.

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CC exotoxins) constitute a family of structurally related toxins which CC share similar biological activities. They stimulate CD4+, CD8+ and CC gamma-delta+ T-cells by binding the beta-chain variable region (V-beta) CC elements on the lateral face of the T-cell receptor (TCR) while CC simultaneously binding the lateral face of the class II major CC histocompatibility complex (MHC) of antigen presenting cells. This causes CC aberrant proliferation of T-cells, which stimulates other components of CC the immune system, causing injury to the host. The peptides are used to CC prevent, treat or protect against toxic shock and septic shock resulting CC from bacterial infections in mammals, particularly humans. The peptides CC are used for inducing serum antibodies that bind at least one CC stabpylococcal enterotoxin or streptococcal exotoxin and both the CC diagnosis of disease related to the presence of bacterial toxins. Nucleic acids encoding a peptide of the invention can be used for the production of the production and the contribute for a discount of the production can be used for the production of the production of the production can be used for the production of the production of the production of the production can be used for the production of the production of the production can be used for the production of the production of the production can be used for the production of the production o
                                   of the peptides for diagnostic reagents, as vaccines and for theraples for pyrogenic exotoxin related diseases. Vectors expressing high levels of the peptides can be used in immunotherapy and immunoprophylaxis when expressed in humans. The antibodies are used for passive immunisation therapy to prevent or increase resistance to toxic shock syndrome or septic shock and to ameliorate the effects of conditions associated with the presence of staphylococcal or streptococcal pyrogenic toxins. The amino acid sequences of the peptides are sufficiently common that they can be used for eliciting antibodies which are cross-reactive with toxins derived from various bacteria. Sequences AAY97844-Y97852 represent conserved region 1 of various Staphylococcus aureus enterotoxins and croup A streptococci pyrogenic toxins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        x9-x10-x11-x12-x13-p-x14-x15-x16-R-x17-x18-x27-x19-x20-x21-x22-x23-x24-y (AAY97864), where: x1, x8, x13 and x24 are each independently selected from L, I and V; x2,x4, x5, x6, x7, x9, x10, x11, x12, x14, x15, x16, x17, x18, x19, x20, x21, x22 and x23 are each independently selected from the group consisting of any amino acid; x3, x5 and x26 are each independently selected from the group consisting of any amino acid and of no amino acid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and septic shock caused by the staphylococcal and streptococcal pyrogenic toxins. The pyrogenic exotoxins of Group A streptococci and the enterotoxins of Staphylococcus aureus (which are also pyrogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to novel peptides (AAY97838-Y97843) comprising a consensus amino acid sequence derived from two conserved regions (regions 1 and 2) of Staphylococcus aureus enterotoxins and streptococcal pyrogenic toxins. Consensus region 1 a preferred consensus region 1) has the sequence X25-X26-Y-G-X1-T-X2-X3-X4-X5-N (AAY97863) and consensus region 2a (a preferred consensus region 2) has the sequence K.X6-X7-X8-
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18-JUN-1999;
Group A streptococci pyrogenic exotoxins.
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The invention also relates to serum antibodies induced by the peptides
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99US-0335581
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                                                                                                                                        The peptide, nucleic acid encoding the peptide and antibody (Ab) produced against the peptide are useful for inhibiting blastogenesis of mononuclear cells (eg. T cells) in the presence of human immunodeficiency virus (HIV), inhibiting HIV replication and protecting a mammal against the deleterious effects of HIV. The peptide is also used to ameliorate the effects of autoimmune diseases associated with the presence of HIV. The Ab is used for passively immunising a mammal against the deleterious
                                                                                                                                                                                                                                                                                                                              Providing protection against, and reducing the severity of, human immunodeficiency virus infections and associated deleterious effects, using peptides from homologous sequences of staphylococcal and
                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Streptococcus sp. Staphylococcus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           streptococcal pyrogenic exotoxin; autoimmune
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                                                                                                     Sequence
                                                                                                                                                                                                                                     streptococcal pyrogenic exotoxin
                                                                                                                                                                                                                                                                                          Claim 5;
                                                                                                                                                                                                                                                                                                                   streptococcal toxins
                                                                                                                                                                                                                                                                                                                                                                                                             Visvanathan K,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mononuclear cell; blastogenesis; inhibitor; HIV; replication; therapy; staphylococcal enterotoxin; human immunodeficiency virus; T cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide #6343, derived from streptococcal and staphylococcal toxins.
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                                                                                                                                                                                                                                                   present sequence is peptide #6343, derived from region homologous sequences of staphylococcal enterotoxin and
CMYGGVTLHEGN
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10; Conser
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                                                                                                     12 AA;
                                      Conservative
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                                                                                                                                                                                                                                                                                         76pp; English
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91.7%;
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                                                  Score 64; DB 22; Pred. No. 7.1e-05;
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                                       Mismatches
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autoimmune
      Toxic shock syndrome; immunogenic response; bacterial infection; staphylococcal enterotoxin; streptococcal pyrogenic toxin; antibody;
                                                    Peptide #3
                                                                            22-DEC-1998
                                                                                                        AAW72424;
                                                                                                                            AAW72424 standard; peptide; 14 AA.
                                                                                                                                                                                                                                                                                                                                        The peptide, nucleic acid encoding the peptide and antibody (Ab) produced against the peptide are useful for inhibiting blastogenesis of mononuclear cells (eg. T cells) in the presence of human immunodeficiency virus (HIV), inhibiting HIV replication and protecting a mammal against the deleterious effects of HIV. The peptide is also used to ameliorate the effects of autoimmune diseases associated with the presence of HIV. The Ab is used for passively immunising a mammal against the deleterious effects of HIV.
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                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence is a peptide from region 1 of staphylococcal enterotoxin SEC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Providing protection against, and reducing the severity of, human immunodeficiency virus infections and associated deleterious effects, using peptides from homologous sequences of staphylococcal and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               streptococcal toxins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200078790-A2
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                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    region 1 of staphylococcal enterotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                              reducing symptoms of toxic shock syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0336627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zabriskie JB;
                                                                                                                                                                                                                                                            90.1%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ımmunisation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 76pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                            Score 64; I
Pred. No. 7.
                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                      DB 22;
                                                                                                                                                                                                                                                            .le-05;
                                                                                                                                                                                                                                                                       Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            replication; therapy; cy virus; T cell;
                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEC
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                                                                                                                                                                                                                                               AAY97840
                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                              Matches
                        Staphylococcus aureus
Streptococcus sp. 'Gro
                                                      Synthetic
                                                                                   antibody.
                                                                                              Pyrogenic exotoxin; enterotoxin; staphylococcal infection; septic
                                                                                                                                    Staphylococcal/streptococcal pyrogenic toxin-derived peptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          x1, x8, x13 and x24 = L, lor y; x3, x25 and x36 = any anino acid (aa) or are absent; x27 = L or y; all other x may be any aa. The peptides can be used to generate serum antibodies (Ab) that bind at least one staphylococcal enterotoxin (SE) or streptococcal endotoxin (SED, Ab are used: (i) for diagnostic detection of SPEA or SEA, SEB and SED, in usual immunoassays; (ii) to inhibit blastogenesis of human mononuclear cells in presence of these toxins (i.e. to protect against or alleviate toxic shock or autoimmune disease associated with bacterial infections); and (iii) for passive immunisation against effects of the toxins. The peptides generate Ab that are cross-reactive with toxins from a variety of bacteria. The present sequence represents a specifically claimed example of a peptide of the present invention.
                                                                                                                                                                                                    AAY97840;
                                                                                                                                                                         29-AUG-2000
                                                                                                                                                                                                                              AAY97840 standard; peptide; 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention describes peptides having consensus sequences #1 or #2, optionally as part of a larger molecule of size at least 6-8 kD. Where consensus sequence #1 and #2 are: XDEX26YGGX1TX2X3X4X5N #1, KX6X7X8X9X10X11X12X13DX14X15X16RX17X18X27X19X20X21X22X23X24Y #2, where
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 4; Page 53; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New peptides that generate antibodies against staphylococcal and streptococcal toxins - used to diagnose, treat or prevent toxic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          shock and autoimmune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bannan JD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYRQ ) UNIV ROCKEFELLER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-OCT-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
Staphylococcus sp.
                                                                                                                                                                                                                                                                                                                                  1 CMYGGVTLHEGN 12
                                                                                                                                                                                                                                                             7
                                                                                                                                                                                                                                                                                                      cmyggvtehegn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-568335/48
                                                                                                                                                                                                                                                                                                                                                             11;
                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zabriskie JB
                                                                                                                                                                                                                                                                                                                                                                                                                                     14 AA;
                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97us-0838413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98WO-US06663
                         'Group A'.
                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                           90.1%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                            Score 64;
Pred. No.
                                                                                                                                                                                                                                Ā
                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                              streptococcal infection; shock; toxic shock; vaca
                                                                                              toxic shock; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                          DB 19;
                                                                                                                                                                                                                                                                                                                                                                         .4e-05;
                                                                                                                                                                                                                                                                                                                                                                                     Length 14;
                                                                                                                                                                                                                                                                                                                                                           Indels
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                                                                                                                                                                                                                                                                                                                                                          Gaps
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WO200020598-A1

13-APR-2000

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CC share similar biological activities. They stimulate CD4+, CD8+ and CC elements on the lateral face of the T-cell receptor (YCR) while CC simultaneously binding the lateral face of the Class II major Simultaneously binding the lateral face of the class II major CC aberrant proliferation of T-cells, which stimulates other components of the immune system, causing injury to the host. The peptides are used to protect against toxic shock and septic shock resulting CC from bacterial infections in mammals, particularly humans. The peptides are used for inducing serum antibodies that bind at least one CC staphylococcal enterotoxin or streptococcal exotoxin and both the CC epetides and antibodies can be used in diagnostic assays to aid in the CC epetides and appetide of the invention can be used for the production CC of the peptides can be used in immunotherapy and immunophylaxis when CC of the peptides can be used in immunotherapy and immunophylaxis when CC the presence of staphylococcal antibodies are used for passive immunisation CC the peptides can be used in immunotherapy and immunophylaxis when CC the presence of staphylococcal or streptococcal pyrogenic toxins. The antibodies are used for passive immunisation CC the presence of staphylococcal or streptococcal pyrogenic toxins. The CC amino acid sequences of the peptides are sufficiently common that they CC am be used for eliciting antibodies which are cross-reactive with toxins derived from various bacteria. Sequences AAY97838-Y978343 represent the Staphylococcus aureus and Group A streptococcal pyrogenic toxins. The CC for protection against or amelioration of toxic or septic shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention also relates to serum antibodies induced by the peptides which provide protection against, or reduce the severity of toxic shocl and septic shock caused by the staphylococcal streptococcal pyrogenic toxins. The pyrogenic exotoxins of Group A streptococci and the enterotoxins of Staphylococcus aureus (which are also pyrogenic exotoxins) constitute a family of structurally related toxins which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the group consisting of any amino acid;
x3, X5 and X26 are each independently selected from the group consisting of any amino acid and of no amino acid;
x27 is either L or Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (AAX97864), where: x1, x8, x13 and x24 are each independently selected from L, I and V; x2,x4, x5, x6, x7, x9, x10, x11, x12, x14, x15, x16, x17, x18, x19, x20, x21, x22 and x23 are each independently selected from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                consensus amino acid sequence derived from two conserved regions (regions 1 and 2) of Staphylococcus aureus enterotoxins and streptococcal pyrogenic toxins. Consensus region 1 (a preferred consensus region 1) has the sequence x25-x26-y-G-G-X1-T-X2-X3-X4-X5-N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to novel peptides (AAY97838-Y97843) comprising consensus amino acid sequence derived from two conserved regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-303782/26
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18-JUN-1999;
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (AAY97863) and consensus region 2a (a preferred consensus region 2) has the sequence K-X6-X7-X8-
x9-X10-X11-X12-X13-D-X14-X15-X16-R-X17-X18-X27-X19-X20-X21-X22-X23-X24-Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptides useful for preventing and reducing the symptoms of toxic shock syndrome and septic shock from staphylococcal and streptococcal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYRQ ) UNIV ROCKEFELLER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-SEP-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Visvanathan K,
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99US-0335581
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zabriskie JB;
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                                                      Matches
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                                                                               Query Match
                                                                                                                                                                            Streptococcal pyrogenic exotoxin.

The peptide, nucleic acid encoding the peptide and antibody (Ab) produced against the peptide are useful for inhibiting blastogenesis of against the peptide are useful for inhibiting blastogenesis of mononuclear cells (eg. T cells) in the presence of human immunodeficiency virus (HIV), inhibiting HIV replication and protecting a mammal against the deleterious effects of HIV. The peptide is also used to ameliorate the effects of autoimmune diseases associated with the presence of HIV.
                                                                                                                                                                                                                                                                            The present sequence is peptide #6344, a cross-linked polymer derived from the homologous sequences of staphylococcal enterotoxin and
                                                                                                                                                                                                                                                                                                                                                                 Providing protection against, and reducing the severity of, human immunodeficiency virus infections and associated deleterious effections peptides from homologous sequences of staphylococcal and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     staphylococcal enterotoxin; human immunodeficiency virus; T cell; streptococcal pyrogenic exotoxin; autoimmune disease; immunisation.
                                                                                                                                                                                                                                                                                                                         Claim 5; Page 38; 76pp; English.
                                                                                                                                                                                                                                                                                                                                                      streptococcal toxins
                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-080820/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200078790-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Staphylococcus sp
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                                                                                                                         Sequence
                                                                                                                                                     effects of
                                                                                                                                                                  The Ab is used for passively immunising a mammal against the deleterious
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYRQ ) UNIV ROCKEFELLER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-JUN-2000; 2000WO-US16680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mononuclear cell; blastogenesis; inhibitor; HIV; replication; therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide #6344,
                                                                   Local
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                          1 CMYGGVTLHEGN 12
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                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                         14 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             derived from streptococcal and staphylococcal toxins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-0336627
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zabriskie JB
12
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91.7%;
                                                                   90.1%;
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                                                     0;
                                                                  Score 64; DB 22;
Pred. No. 8.4e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 64; DB 21; Pred. No. 8.4e-05;
                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 21;
                                                                              Length 14;
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                                                                                                                                                                                                                                                                                                                                                                                    effects,
                                                     Gaps
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RESULT AAW72426

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                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                          X1, X8, X13 and X24 = L, I or Y; X3, X25 and X36 = any anino acid (aa) or are absent; X27 = L or Y; all other X may be any aa. The peptides can be used to generate serum antibodies (Ab) that bind at least one staphylococcal enterotoxin (SE) or streptococcal endotoxin (SEP). Ab are used: (1) for diagnostic detection of SPEA or SEA, SEB and SED, in usual immunoassays; (ii) to inhibit blastogenesis of human mononuclear cells in presence of these toxins (i.e. to protect against or alleviate toxic shock or autoimmune disease associated with bacterial infections); and (iii) for passive immunisation against effects of the toxins. The peptides generate Ab that are cross-reactive with toxins from a variety of bacteria. The present sequence represents a specifically claimed
            29-AUG-2000
                                          AAY97842;
                                                                     AAY97842 standard;
                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention describes peptides having consensus sequences #1 or #2, optionally as part of a larger molecule of size at least 6-8 kD. Where consensus sequence #1 and #2 are: x25X26Y6GXTYXXXX4XN #1, KX6XXX8X9X.0X11X12X13DX14X15X16RX17X18X27X19X20X21X22X23X24Y #2, where
                                                                                                                                                                                                                                                                                                                      example of a peptide of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 4; Page 54; 69pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New peptides that generate antibodies against staphylococcal and streptococcal toxins - used to diagnose, treat or prevent toxic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-APR-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide #5 for reducing symptoms of toxic shock syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYRQ ) UNIV ROCKEFELLER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-OCT-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Staphylococcus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Toxic shock syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-DEC-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW72426 standard; peptide; 36 AA
                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                   سر
                                                                                                                                                                                1 CMYGGVTLHEGN 12
                                                                                                                                                   cmyggvtehegn 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               autoimmune diseases
                                                                                                                                                                                                                                                                                           36
                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zabriskie JB;
            (first entry)
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                                                                     peptide;
                                                                                                                                                                                                                             90.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immunogenic response; bacterial infection;
                                                                                                                                                                                                                0,
                                                                                                                                                                                                                             Score 64;
Pred. No.
                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                         DB 19; Length 36;
                                                                                                                                                                                                                             .00024;
                                                                                                                                                                                                              Indels
                                                                                                                                                                                                             0;
                                                                                                                                                                                                             Gaps
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CC pyrogenic toxins. The pyrogenic exotoxins of Group A streptococci and Ct the enterotoxins of Staphylococcus aureus (which are also pyrogenic exotoxins) constitute a family of structurally related toxins which CC share similar biological activities. They stimulate CD4+, CD8+ and CC gamma-delta+ T-cells by binding the beta-chain variable region (V-beta) CC elements on the lateral face of the T-cell receptor (TCR) while CC simultaneously binding the lateral face of the class II major CC simultaneously binding the lateral face of the class II major CC simultaneously binding the lateral face of the class II major CC aberrant proliferation of T-cells, which stimulates other components of CC the immune system, causing injury to the host. The peptides are used to prevent, treat or protect against toxic shock and septic shock resulting CC from bacterial infections in mammals, particularly humans. The peptides care used for inducing serum antibodies that bind at least one Staphylococcal enterotoxin or streptococcal exotoxin and both the CC diagnosis of disease related to the presence of bacterial toxins. Nucleic CC drids encoding a peptide of the invention can be used for the production of the peptides for diagnostic reagents, as vaccines and for therapies CC of the peptides can be used in immunotherapy and immunoprophylaxis when CC septic shock and to ameliorate the effects of conditions associated with the effects of conditions associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention also relates to serum antibodies induced by the peptides which provide protection against, or reduce the severity of toxic shock and septic shock caused by the staphylococcal and streptococcal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (AAX97864), where: X1, X8, X13 and X24 are each independently selected from L, I and V; X2,X4, X5, X6, X7, X9, X10, X11, X12, X14, X15, X16, X17, X18, X19, X20, X21, X22 and X23 are each independently selected from the group consisting of any amino acid; 33, X5 and X26 are each independently selected from the group consisting of any amino acid; and of no amino acid; 32, X5 and X26 are each independently selected from the group consisting of any amino acid and of no amino acid; 327 is either L or Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            streptococcal pyrogenic toxins. Consensus region 1a (a preferred consensus region 1) has the sequence x25-x26-Y-G-G-X1-T-X2-X3-X4-X5-N (AXY97863) and consensus region 2) has the sequence K-X6-X7-X8-the sequence K-X6-X7-X8-X1-X13-X15-X16-X-X17-X18-X27-X19-X20-X21-X22-X23-X24-Y
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 4; Page 88; 115pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptides useful for preventing and reducing the symptoms of toxic shock syndrome and septic shock from staphylococcal and streptococcal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-303782/26.
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18-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pyrogenic exotoxin; enterotoxin; streptococcal infection; staphylococcal infection; septic shock; toxic shock; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UYRQ ) UNIV ROCKEFELLER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antibody.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ďD,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sp.
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99US-0335581
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presence of staphylococcal or streptococcal pyrogenic toxins.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid sequences of the peptides are sufficiently common that they can be used for eliciting antibodies which are cross-reactive with toxins derived from various bacteria. Sequences AAY97838-Y978343 represent the synthetic peptides based on consensus consensus regions 1 and 2 of Staphylococcus aureus and Group A streptococcal pyrogenic toxins. These peptides can be administered to a mammal to raise serum antibodies for protection against or amelioration of toxic or septic shock.
                                              The peptide, nucleic acid encoding the peptide and antibody (Ab) produced against the peptide are useful for inhibiting blastogenesis of mononuclear cells (eg. T cells) in the presence of human immunodeficiency virus (HIV), inhibiting HIV replication and protecting a mammal against the deleterious effects of HIV. The peptide is also used to ameliorate the effects of autoimnune diseases associated with the presence of HIV. The Ab is used for passively immunising a mammal against the deleterious
                                                                                                                                                                                                                                                                Providing protection against, and reducing the severity of, human immunodeficiency virus infections and associated deleterious effeusing peptides from homologous sequences of staphylococcal and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Staphylococcus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              streptococcal pyrogenic exotoxin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              staphylococcal enterotoxin; human immunodeficiency virus; T cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide #6347, derived from streptococcal and staphylococcal toxins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY72180;
                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                            Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                           18-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mononuclear cell; blastogenesis; inhibitor; HIV; replication; therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY72180 standard;
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   Sequence
                                                                                                                                                         exotoxin.
                                                                                                                                                                       sequences of staphylococcal enterotoxin and streptococcal pyrogenic
                                                                                                                                                                                       The present sequence is peptide #6347, derived from the homologous
                                                                                                                                                                                                                                                     streptococcal toxins
                                                                                                                                                                                                                                                                                                                                                                                           (UYRQ ) UNIV ROCKEFELLER
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                                                                                                                                                                                                                                                                                                                               2001-080820/09.
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                                                                                                                                                                                                                      5; Page 38; 76pp; English
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                                 HIV.
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   36 AA
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                                                                                                                                                                                                                                                                                                                                                            Zabriskie JB;
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91.7%;
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                                                        The present invention describes peptides having consensus sequences or #2, optionally as part of a larger molecule of size at least 6-8 Where consensus sequence #1 and #2 are: X25X26YGGXITX2X3X4X5N #1,
                                                                                                                                                                                                                    New peptides that generate antibodies against staphylococcal and streptococcal toxins - used to diagnose, treat or prevent toxic shock and autoimmune diseases
                                                                                                                                                                                                    Claim 4; Page 54; 69pp; English.
                                                                                                                                                                                                                                                                                                        07-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                         Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                Toxic shock syndrome; immunogenic response; bacterial infection; staphylococcal enterotoxin; streptococcal pyrogenic toxin; antib
                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide #6
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                                         Sequence
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                                                                                                                                                                                                                                                                                                                        01-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                          for reducing symptoms of toxic shock syndrome
                                           38
                                                                                                                                                                                                                                                                      Zabriskie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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        90.1%;
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Score 64; DB Pred. No. 0.00 0; Mismatches
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Pred. No. 0.
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                  DB 19;
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                Length 38;
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                                                                                                                                                                                                                                                                                                                                                                                                                   antibody;
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                pyrogenic toxins. The pyrogenic exotoxins of Group A streptococci and the enterotoxins of Staphylococcus aureus (which are also pyrogenic exotoxins) constitute a family of structurally related toxins which share similar biological activities. They stimulate CD4+, CD8+ and gamma-delta+ T-cells by binding the beta-chain variable region (V-beta) elements on the lateral face of the T-cell receptor (TCR) while simultaneously binding the lateral face of the class II major histocompatibility complex (MHC) of antigen presenting cells. This causes aberrant proliferation of T-cells, which stimulates other components of the immune system, causing injury to the host. The peptides are used to prevent, treat or protect against toxic shock and septic shock resulting from bacterial infections in mammals, particularly humans. The peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the group consisting of any amino acid; x3, x5 and x26 are each independently selected from the group consisting of any amino acid and of no amino acid; x27 is either L or Y.

The invention also relates to serum antibodies induced by the peptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (regions 1 and 2) of Staphyrocucus unreal consensus region 1a (a preferred streptococcal pyrogenic toxins. Consensus region 1a (a preferred consensus region 1) has the sequence X25-X26-Y-G-G-X1-T-X2-X3-X4-X5-N consensus region 2) his
                                                                                                                                                                                                                                                                                                                                                                                                               which provide protection against, or reduce the severity of toxic and septic shock caused by the staphylococcal and streptococcal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to novel peptides (AAY97838-Y97843) comprising consensus amino acid sequence derived from two conserved regions (regions 1 and 2) of Staphylococcus aureus enterotoxins and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 4; Page 88; 115pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptides useful for preventing syndrome and septic shock from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-303782/26.
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18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UYRQ ) UNIV ROCKEFELLER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-APR-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Staphylococcus aureus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pyrogenic exotoxin; enterotoxin; streptococcal infection; staphylococcal infection; septic shock; toxic shock; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Staphylococcal/streptococcal pyrogenic toxin-derived peptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY97843 standard; peptide; 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ď,
   for inducing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Visvanathan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0168303
99US-0335581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US22180
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   serum antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zabriskie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and reducing the symptoms of toxic shock staphylococcal and streptococcal
that bind at least one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6348
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RESULT
AAY72181
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Best Local S
Matches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cc staphylococcal enterotoxin or streptococcal exotoxin and both the peptides and antibodies can be used in diagnostic assays to aid in the cdidagnosis of disease related to the presence of bacterial toxins. Nucleic acids encoding a peptide of the invention can be used for the production of the peptides for diagnostic reagents, as vaccines and for therapies confirmed to the peptides can be used in immunotherapy and immunoprophylaxis when expressed in humans. The antibodies are used for passive immunisation conterapy to prevent or increase resistance to toxic shock syndrome or septic shock and to ameliorate the effects of conditions associated with the presence of staphylococcal or streptococcal pyrogenic toxins. The canno acid sequences of the peptides are sufficiently common that they can be used for eliciting antibodies which are cross-reactive with toxins derived from various bacteria. Sequences ANY97838-Y978343 represent the staphylococcus aureus and Group A Streptococcal pyrogenic toxins. The caphylococcus aureus and Group A Streptococcal pyrogenic toxins are consequences of the peptides are used for eliciting antibodies.
                                                                                                                                     Providing protection against, and reducing the severity of, human immunodeficiency virus infections and associated deleterious effections peptides from homologous sequences of staphylococcal and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mononuclear cell; blastogenesis; inhibitor; HIV; replication; therapy; staphylococcal enterotoxin; human immunodeficiency virus; T cell; streptococcal pyrogenic exotoxin; autoimmune disease; immunisation.
                                                                                       Claim 5; Page
                                                                                                                                                                                                                WPI; 2001-080820/09.
                                                                                                                                                                                                                                                                                   (UYRQ ) UNIV ROCKEFELLER
                                                                                                                                                                                                                                                                                                                        18-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                WO200078790-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Staphylococcus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Streptococcus sp
                                                                                                                                                                                                                                                                                                                                                                                            28-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY72181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY72181 standard; peptide; 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide #6348, derived from streptococcal and staphylococcal toxins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 These peptides can be administered to a mammal to raise serum an for protection against or amelioration of toxic or septic shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CMYGGVTLHEGN 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                     38; 76pp; English
                                                                                                                                                                                                                                                                                                                      99us-0336627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      can be administered to a mammal to raise serum antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90.1%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 64;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.00025;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 38,
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The present sequence is peptide #6348, a cross-linked polymer derived from the homologous sequences of staphylococcal enterotoxin and streptococcal pyrogenic exotoxin.

The peptide, nucleic acid encoding the peptide and antibody (Ab) produces the peptide of the peptide of the peptide of the peptide and antibody.

encoding the

antibody (Ab) produced

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RESULT 15
AAR13208
IDA AAR1321
XX AAR1321
XX Staphy
XX SEC3;
OS Staphy
XX SEC3;
OS Staphy
XX W09110
XX W09110
XX IT-JAN
XX IT-GAM
PF 17-JAN
XX IT-GAM
PF 17-JAN
XX IT-GAM
PF 18-MM1; 1

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Best Local Similarity
Matches 11; Conserv
                                                        Query Match 90.3
Best Local Similarity 83.3
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     against the peptide are useful for inhibiting blastogenesis of mononuclear cells (eg. T cells) in the presence of human immunodeficiency virus (HIV), inhibiting HIV replication and protecting a mammal against the deleterious effects of HIV. The peptide is also used to ameliorate the effects of autoimmune diseases associated with the presence of HIV. The Ab is used for passively immunising a mammal against the deleterious
                                                                                                                                                                                                                                                                             SEC3 was isolated and purified from S.aureus. It can be used for treating cancer, activating cytokine mediators and procoagulant systems, augmenting natural killer cell cytotoxicity, etc. The enterotoxin can be administered intravenously, optionally with ibuprofen to attenuate toxic reaction to SEC3. Synthetic polypeptides having structural homology to Staphylococcal exotoxins are claimed, provided the homology includes statistically significant sequence homology, alignment of Cysteine residues and see AAR13203-R13211.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Staphylococcus aureus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEC3; cancer treatment; pyrogen; tumouricide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Staphylococcal enterotoxin C3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Treating cancer with enterotoxin from Staphylococcus aureus administered by IV injection, having same tumoricidal activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Terman DS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-JAN-1990;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Fig 1; 74pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1991-237984/32.
                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      as Staphylococcal protein A without potential toxic reactions
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-JUL-1991
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1 CMYGGVTLHEGN 12
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                                                                                                                                                                                                                        238 AA;
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91.78;
                                                                                         90.1%;
                                                        Score 64; DB
Pred. No. 0.00
1; Mismatches
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                                                                                      DB 12;
0.0019;
                                                                                                                    Length 238;
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                                                           Indels
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Maximum DB
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Gapop 10.0 , Gapext 0.5
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enterotoxin C-1 prenterotoxin C3 - S enterotoxin A prec enterotoxin A prec enterotoxin A prec enterotoxin A precurs exotoxin A precurs exotoxin Type A prexity exotoxin type A precurs exotoxin type A precurs enterotoxin B prec enterotoxin B prec enterotoxin B prec preprotein translohigh choriolytic high mobilization protein fact transposase (09) B transposase (09) B
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     A; Accession: A60114 A; Status: not compared with conceptual translation A
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30 39 54.9 156 31 39 54.9 156 32 39 54.9 156 33 39 54.9 156 34.9 156 35.5 26.9 16.9 16.9 16.9 16.9 16.9 16.9 16.9 1						
56 2 H8367; 57 2 H3367; 58 2 E8368; 58 2 E83633 transposase (09) B ribosomal protein ribosomal ribosomal protein ribosomal protein ribosomal ribos	C-2 precursor - Staphylococcus aureus names: enterotoxin C-3 precursor Staphylococcus aureus Staphylococcus aureus 900-1992 #sequence_revision 10-Nov-1992 #text_chang Nov-1992 #sequence_revision 10-Nov-1992 #text_chang A60114; B60114; A33866 A ; Schlievert, P.M. un. 57, 2249-2252, 1989 un. 57, 2249-2526, 1989 un. 57, 2249-2252, 1989 un. 57,	Query Match 90.1%; Score 64; DB 1; Length 266; Best Local Similarity 83.3%; Pred. No. 0.00091; Matches 10; Conservative 1; Mismatches 1; Indels 0; 1 CMYGGVTLHEGN 12 1	nce number: A01816; MUID:83213327 lon: A01816 let type: protein es: 28-75,/IL',78-176,'N',178-266 <sch> cs: entC1 amily: enterotoxin B ds: enterotoxin Omain: signal sequence #status predicted <sig> //Product: enterotoxin C-1 #status experimental <maty #status="" bonds:="" disulfide="" experimental<="" td=""><td>A01816 A01816 ievert, P.M. , 15-20, 1987 sequence of the staphylococcal enterotoxin C1 gene and 306356; MUID:88038352 OHD SMBL:X05815; NID:g46566; PIDN:CAA29260:1; PID:g46567 TO, L. 15-300-6306, 1983</td><td>ALIGNMENTS C-1 precursor - Staphylococcus aureus Staphylococcus aureus Nov-1984 #sequence revision 05-Jan-1996 #text change 18-Jun-</td><td>39 54.9 156 2 H83671 transposase (C 39 54.9 156 2 E83683 ribosomal prot 39 54.9 198 2 S54733 ribosomal prot 39 54.9 767 2 A35645 major surface 39 54.9 805 2 T40739 rmajor surface 39 54.9 805 2 T40739 rmajor surface 39 54.9 916 2 D83093 secretion prot 39 54.9 916 2 D83093 Hroxl protein 39 54.9 916 2 D83093 Hroxl protein 30 53.5 347 2 T35313 Hroxl protein 31 53.5 347 2 T35013 ribosomal probable membrated in the secretion of the secretio</td></maty></sig></sch>	A01816 A01816 ievert, P.M. , 15-20, 1987 sequence of the staphylococcal enterotoxin C1 gene and 306356; MUID:88038352 OHD SMBL:X05815; NID:g46566; PIDN:CAA29260:1; PID:g46567 TO, L. 15-300-6306, 1983	ALIGNMENTS C-1 precursor - Staphylococcus aureus Staphylococcus aureus Nov-1984 #sequence revision 05-Jan-1996 #text change 18-Jun-	39 54.9 156 2 H83671 transposase (C 39 54.9 156 2 E83683 ribosomal prot 39 54.9 198 2 S54733 ribosomal prot 39 54.9 767 2 A35645 major surface 39 54.9 805 2 T40739 rmajor surface 39 54.9 805 2 T40739 rmajor surface 39 54.9 916 2 D83093 secretion prot 39 54.9 916 2 D83093 Hroxl protein 39 54.9 916 2 D83093 Hroxl protein 30 53.5 347 2 T35313 Hroxl protein 31 53.5 347 2 T35013 ribosomal probable membrated in the secretion of the secretio

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enterotoxin A precursor - Staphylococcus aureus C;Species: Staphylococcus aureus C;Species: Staphylococcus aureus C;Date: 30-Jun-1989 #segupence_revision 30-Jun-1989 #text_change 15-Oct-19 C;Accession: A28664; A29566 R;Betley, M.J.; Mekalanos, J.J. J. Bacteriol. 170, 34-41, 1988 A;Title: Nucleotide sequence of the type A staphylococcal enterotoxin ger A;Reference number: A28664; MUID:88086892 A;Accession: A28664 A;Molecule type: DNA A;Rocession: A28664 A;Molecule type: DNA A;Residues: 1-257 <BET> A;Cross-references: GB:M18970; NID:g153120; PIDN:AAA26681.1; PID:g153121 A;Experimental source: Strain FRI337 R;Huang, I.Y.; Hughes, J.L.; Bergdoll, M.S.; Schantz, E.J.
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A;Residues: 1-266 <BOH>
A;Residues: 1-266 <BOH>
A;Recession: B60114
A;Molecule type: protein
A;Molecule type: protein
A;Molecule type: protein
A;Residues: 28-66 <BOH2>
R;Couch, J.L.; Betley, M.J.
J. Bacteriol: 171, 4507-4510, 1989
A;Title: Nucleotide sequence of the type C-3 staphylococcal enterotoxin gene suggests :
A;Reference number: A33866; MUID:89327174
A;Recession: A33866
A;Status: preliminary
A;Molecule type: DNA
A;Molecule type: DNA
A;Gross-references: GB:M28364; NID:g153003; PIDN:AAA26624.1; PID:g153004
C;Genetics:
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A;Cross-references: GB:X51661; NID:g46570; PIDN:CAA35972.1; PID:g46571C;Superfamily: enterotoxin B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mol. Gen. Genet. 220, 329-333, 1990
A;Title: Nucleotide sequence of the staphylococcal enterotoxin A;Reference number: S11885; MUID:90220508
A;Accession: S11885
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C;Superfamily: enterotoxin B
F;1-27/Domain: signal sequence #status predicted <SIG>F;28-266/Product: enterotoxin C-2 #status predicted <M
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Pred. No. 0.00091;
1; Mismatches 1
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R;Couch, J.L.; Soltis, M.T.; Betley, M.J.
J. Bacteriol. 170, 2954-2960, 1988
A;Title: Cloning and nucleotide sequence of th
A;Reference number: A28179; MUID:88257005
A;Accession: A28179
A;Molecule type: DMA
A;Residues: 1-257 <COU>
A;Cross-references: GB:M21319; NID:g153001; PI
C;Superfamily: enterotoxin B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J. Biol. Chem. 262, 7006-7013, 1987
A;Title: Complete amino acid sequence of staphylococcal enterotoxin
A;Reference number: A29566; MUID:87222293
A;Accession: A29566
A;Molecule type: protein
A;Residues: 25-241,'S',243-257 <HUA>
C;GenetLos:
C;GenetLos:
                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-250 <JOH>
C; Superfamily: enterotoxin
C; Keywords: exotoxin
                                                                                                                                                                                                         R;Johnson, L.P.; L'Italien, J.J.; Schlievert, P.M.
Mol. Gen. Genet. 203, 354-356, 1986
A;Title: Streptococcal pyrogenic exotoxin type A (scarlet fever A;Reference number: A26152; MUID:86284313
A;Accession: A26152
                              Qγ
                                                                                                                                                                                                                                                                                                       streptococcal pyrogenic exotoxin type A precursor - Streptococcus sp.
N;Alternate names: scarlet fever toxin; SPE type A (speA)
C;Species: Streptococcus sp.
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
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C;Species: Staphylococcus aureus
C;Date: 30-Jun-1989 #sequence_revision 30-Jun-1989
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C; Superfamily:
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R; Couch, J.L.; Solt
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Best Local
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                              1 CMYGGVTLHEGN 12
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A:Title: Characterization and clonal distribution of four alleles of the speA gene encod A:Reference number: $18782; MUID:92044323

A;Accession: $18786

A;Status: nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Residues: 1-236 <NEL>
A;Cross-references: EMBL:x61561; NID:947297; PIDN:CAAA3759.1; PID:947298
A;Cross-references: EMBL:x61561; NID:947297; PIDN:CAAA3759.1; PID:947298
A;Cross-references: EMBL:x61561; NID:947297; PIDN:CAAA3759.1; PID:947298
A;Cross-references: EMBL:x61562; NID:947297; PIDN:CAAA3759.1; PID:947298
A;Cross-references: EMBL:x61562; NID:947299; PIDN:CAAA3760.1; PID:947300
A;Residues: 1-236 <NEA>
A;Cross-references: EMBL:x61562; NID:947299; PIDN:CAAA3760.1; PID:947300
A;Cross-references: EMBL:x61562; NID:947299; PIDN:CAAA3760.1; PID:947300
A;Cross-references: EMBL:x61562; NID:947299; PIDN:CAAA3760.1; PID:947300
A;Cross-references: EMBL:x61563; NID:947299; PIDN:CAAA3760.1; PID:947300
A;Cross-references: EMBL:x61563; NID:947301; PIDN:CAAA3761.1; PID:947302
A;Cross-references: EMBL:X61563; NID:947301; PIDN:CAAA3761.1; PID:947302
A;Experimental source: strain MGAS256 isolate California unassigned phage
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 1991
A;Accession: S18788
A;Experimental source: strain MGAS256 isolate California unassigned phage
A;Molecule type: DNA
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A; Variety: strain McAS262 isolate California
C; Date: 29-Jan-1993 #sequence_revision 29-Jan-1993 #text_change
C; Accession: S18789
C; Accession: S18789
R; Nelson, K.; Schilevert, P.M.; Selander, R.K.; Musser, J.M.
J. Exp. Med. 174, 1271-1274, 1991
A; Title: Characterization and clonal distribution of four allele
A; Reference number: S18782; MUID:92044323
A; Accession: S18789
A; Status: nucleic acid sequence not shown; translation not shown
A; Molecule type: DNA
A; Molecule type: DNA
A; Molecule type: DNA
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A;Varlety: strain MGAS250 isolate California; strain MGAS251 isolate California;
isolate United Kingdom: strain MGAS496 isolate Germany
C;Date: 29-Jan-1993 #sequence_revision 29-Jan-1993 #text_change 16-Jul-1999
C;Accession: S18786; S18787; S18788; S18790; S18795; S18795; S18795
R;Nelson, K.; Schlievert, P.M.; Selander, R.K.; Musser, J.M.
J. Exp. Med. 174, 1271-1274, 1991
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120 CIYGGVTNHEGN 131
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       names: scarlet fever toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        enterotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84.5%;
83.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 60; DB Pred. No. 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Streptococcus pyogenes (strain MGAS262 isolate Califor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIDN:CAA43771.1; PID:g47304 d to the EMBL Data Library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2; Length 236; ).0041;
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             A; Molecule type: DNA; Residues: 1-236 < A; Cross-references:
                                                                                                         A; Accession: S18794
A; Status: nucleic ac
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CIYGGVTNHEGN 131

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C; Superfamily: entero
C; Keywords: exotoxin
F; 1-22/Domain: signal
F; 23-236/Product: exo
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A;Experimental source: strain MGAS480 isolate Yugoslavia unassigned phage
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 199
A;Accession: S18795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Residues: 1-236 <NEY>
A;Cross-references: EMBL:X61564; NID:g47305; PIDN:CAA43762.1; PID:g47306
A;Experimental source: strain MGAS285 isolate Colorado unassigned phage
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, 8
A;Accession: $18792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: EMBL:X61566; NID:g47317; PIDN:CAA43764.1; PID:g47318
A;Experimental source: strain MGAS492 isolate United Kingdom unassigned phage
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 199
A;Accession: S18799
                                                                                                                                                                                                                                                                                                                  A; Note: the C; Genetics:
                                                                                                                                                                                                                                                                                                                                     A;Cross-references: EMBL:X61567; NID:g47325; PIDN:CAA43765.1; PID:g47326
A;Experimental source: strain MGAS496 isolate Germany unassigned phage
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-236 < NI
                                                                                                                                                                                                                                                                                    A; Gene: speA2
                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-236 <NES>
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A; Residues: 1-236 <NEH>
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                                                      Matches
                                                                                                  Query Match
                                                                                                                                                                                                          /Domain: signal sequence
                                                                            Local
1 CMYGGVTLHEGN 12
                                                 10;
                                                                            Similarity
                                                                                                                                                                                                                                                                enterotoxin
                                                   Conservative
                                                                                                                                                                              gnal sequence (fragment) #status predicted
exotoxin type A (fragment) #status predict
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                                                                         Score 60;
Pred. No.
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                                                 Indels
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                                                 Gaps
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R;Nelson, K.; Schlievert, P.M.; Selander, R.K.; Musser, J.M.

J. Exp. Med. 174, 1271-1274, 1991

A;Title: Characterization and clonal distribution of four alleles of the spel
A;Reference number: \$18782; MUID:92044323

A;Accession: \$18783

A;Accession: \$18783

A;Status: nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Residues: 1-236 <NEL>
A;Cross-references: EMBL:X61568; NID:947289; PIDN:CAA43766.1; PID:947290
A;Experimental source: strain MGAS158 isolate Nebraska unassigned phage
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, Septon A;Accession: \$18793
A;Status: nucleic acid sequence not shown; translation not shown
A;Accession: \$18793
A;Status: nucleic acid sequence not shown; translation not shown
A;Residues: 1-236 <NEA>
A;Rolecule type: DNA
A;Residues: 1-236 <NEA>
A;Rolecule type: DNA
A;Residues: 1-236 <NEA>
A;Residues: 1-236 <NEA>
A;Rolecule type: DNA
A;Residues: 1-236 <NEA>
A;Residues: 1-236 <NEA>
A;Residues: 1-236 <NEA>
A;Rolecule type: DNA
A;Residues: 1-236 <NEA
A;Residues: 1-236 <NEA N;Alternate names: scarlet fever toxin C;Species: Streptococcus pyogenes phage A;Variety: strain MGAS188 isolate Yugoslavia; C;Date: 29-Jan-1993 #sequence_revision 29-Jan-1993 #text_change 16-Jul-1999 C;Accession: S18783; S18793; S18794; S18801; S18798 exotoxin type A precursor (allele 3) - Streptococcus pyogenes phage (strain MGAS158 N; Alternate names: scarlet fever toxin speA gene φ

DNA

<NEZ>

EMBL: X61570;

NID:g47315;

PIDN:CAA43768.1; PID:g47316

acid sequence

not

shown;

translation

not

shown

PIDN:CAA43767.1; PID:g47314 e Yugoslavia unassigned phage

September 199

September 199

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A; Experimental source: strain MGAS491 isolate United Kingdom unassigned phage A; Note: the nucleotide sequence was submitted to the EMBL Data Library, September 1991 A; Accession: S18801

A; Status: nucleic acid sequence not shown; translation not shown A; Molecule type: DNA

A; Residues: 1-236 <NEFY>
A; Cross:references: EMBL:X61572; NID:947333; PIDN:CAA43770.1; PID:947334

A; Experimental source: strain MGAS624 isolate Germany unassigned phage A; Note: the nucleotide sequence was submitted to the EMBL Data Library, September 1991 A; Accession: S18798

A; Status: nucleic acid sequence not shown; translation not shown A; Molecule type: DNA

A; Residues: 1-236 <NEO>
A; Cross:references: EMBL:X61571; NID:947323; PIDN:CAA43769.1; PID:947324

A; Residues: 1-236 <NEO>
A; Residues: 1-236 <NEO

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A; Residues: 1-251 <WEE>
A; Cross-references: GB:U40453; EMBL:M19350; NID:g1877426; PIDN:AAC48868.1;
A; Cross-references: GB:U40453; EMBL:M19350; NID:g1877426; PIDN:AAC48868.1;
A; Nelson, K.; Schlievert, P.M.; Selander, R.K.; Musser, J.M.
J. Exp. Med. 174, 1271-1274, 1991
A; Title: Characterization and clonal distribution of four alleles of the sp. A; Reference number: S18782; MUID:92044323
A; Reference number: S18782
A; Status: nucleic acid sequence not shown; translation not shown
A; Molecule type: DNA
A; Residues: 9-244 <NELLY STATES TERMINISTER 1. TITLE 1778.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               exotoxin type A precursor (allele 1) - Streptococcus pyogenes phage T12 N;Alternate names: erythrogenic toxin; scarlet fever toxin C;Species: Streptococcus pyogenes phage T12 C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999 C;Accession: S29659; S18782; S18784; S18785; S18791; S18796; S18797; S18800 R;Weeks, C.R.; Ferretti, J.J. Infect. Immun. 52, 144-150, 1986 A;Reference number: S29659; MUID:86166804 A;Accession: S29659; MUID:86166804
     A;Cross-references: EMBL:X61559; NID:g47293; PIDN:CAA43757.1; PID:g47294
A;Experimental source: Streptococcus pyogenes strain MGAS167 isolate Texas unassigned
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 1991
                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: EMBL:X61556; NID:g47291; PIDN:CAA43754.1; PID:g47292
A;Experimental source: Streptococcus pyogenes strain MGAS165 isolate Minnesota unassigne
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 1991
                                                                                                                                                                A; Molecule type: DNA
A; Residues: 9-244 <NEZ>
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                                                                                                                                                                                                                                                                                                            A; Note: the nucleotide sequence A; Accession: S18785
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A; Residues: 9-244 < NEA>
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A;Status: nucleic acid sequence not shown; translation not shown
A;Status: nucleic acid sequence not shown; translation not shown
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A;Rocession: Shown
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A;Roc
R:Huang, I.Y.; Bergdoll, M.S.
J. Biol. Chem. 245, 3511-3517, 1970
A;Title: The primary structure of staphylococcal
A;Reference number: A92064; MUID:71007901
A;Contents: annotation; chymotryptic peptides
                                                                                                                                                                                                                                                   R.Huang, I.Y.; Bergdoll, M.S.
J. Biol. Chem. 245, 3518-3525, 1970
A;Title: The primary structure of staphylococcal enterotoxin B. III. The cyanogen bro A;Reference number: A92065; MUID:71007902
A;Accession: A92065
A;Accession: A92065
A;Residues: 28-25, 'NND',59-68,'NE',71,'FDLIYL',78-117,119-127,'N',129,'D',131-132,'EN A;Experimental source: Strain S-6
A;Experimental source: Strain S-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C:Species: Staphylococcus aureus
C:Date: 24-Apr-1984 #sequence_revision 15-Oct-1996
C:Accession: S27360; A92065; S27240; A01815
R:Jones, C.L.; Khan, S.A.
J. Bacteriol. 166, 29-33, 1986
A:Title: Nucleotide sequence of the enterotoxin B g A; Reference number: S27360; MUID:86168029
A:Accession: S27360
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A;Rolecule type: DNA
A;Rosidues: 9-244 <NEO>
A;Cross-references: EMBL:X61557; NID:g47319; PIDN:CAA43755.1; PID:g47320
A;Cross-references: EMBL:X61557; NID:g47319; PIDN:CAA43755.1; PID:g47320
A;Experimental source: Streptococcus pyogenes strain MGAS493 isolate France unassigne
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 199
A;Accession: S18797
A;Status: nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Rosidues: 9-244 <NEH>
A;Cross-references: EMBL:X61558; NID:g47321; PIDN:CAA43756.1; PID:g47322
A;Cross-references: EMBL:X61558; NID:g47321; PIDN:CAA43756.1; PID:g47322
A;Cross-references: EMBL:X61558; NID:g47321; PIDN:CAA43756.1; PID:g47322
A;Rote: the nucleotide sequence was submitted to the EMBL Data Library, September 199
A;Accession: S18800
A;Molecule type: DNA
A;Molecule type: DNA
A;Rosidues: 9-228 <NESS-
A;Rosidues: 9-2
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A; Experimental source: strain S6
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F;1-30/Domain: signal sequence #
F;31-251/Product: exotoxin type
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A; Residues: 1-266 < JON>
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A;Experimental source: Streptococcus pyogenes strain MGAS500 isolate New Zealand unas
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, September 199
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A;Accession: S18796
A;Status: nucleic acid sequence
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83.3%;
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0.0043;
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A;Title: The primary structure of staphylococcal enterotoxin B. I. Isolation, compositic A;Reference number: A92063; MUID:71007900
A;Centents: annotation; tryptic peptides
R;Schantz, E.J.; Roessler, W.G.; Wagman, J.; Spero, L.; Dunnery, D.A.; Bergdoll, M.S.
Blochemistry 4, 1011-1016, 1965
A;Title: Purification of staphylococcal enterotoxin B.
A;Reference number: A90548; MUID:66035792
A;Contents: annotation; biological source of protein
A;Reference number: S7240; MUID:93049338
A;Reference number: S7240; MUID:93049338
C:Species: Bacillus subtilis
C;Date: 04-Dec-1992 #sequence_revision 04-Dec-1992 #text_change 17-Nov-2000
C;Accession: JQ0647; S17771; F69704
R;Sadale, Y; Takamatsu, H.; Nakamura, K.; Yamane, K.
Gene 98, 101-105, 1991
A;Title: Sequencing reveals similarity of the wild-type div+ gene of Bacillu A; Reference number: JN0145; MUID:91192600
A;Accession: JQ0647
A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               enterotoxin D precursor - Staphylococcus aureus C;Species: Staphylococcus aureus C;Date: 09-Mar-1990 *sequence_revision 09-Mar-1: C;Accession: A33953 R;Bayles, K.W.; Iandolo, J.J. Bacteriol. 171, 4799-4806, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Superfamily: enterotoxin B
C;Keywords: enterotoxin; extracellular protein; toxin
F;1-27/Domain: signal sequence *status predicted <SIG>F;28-266/Product: enterotoxin B *status experimental <MAT>F;120-140/Disulfide bonds: *status experimental
                                                                                                                                                                                                                preprotein translocase secA - Bacillus subtilis
N;Alternate names: Div protein; secA protein homolog
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C;Superfamily: enterotoxin B
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A; Residues: 1-258 <BAY>
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A; Residues: 28-42;128-148 <ALA>
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Biol. Chem. 245, 3493-3510,
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Pred. No. 0.0068;
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A; Cross-references: EMBL:X62035; NID:y48979; PIDN:CAA43977.1; PID:y48980
A; Cross-references: EMBL:X62035; NID:y48979; PIDN:CAA43977.1; PID:y48980
R; Kunst, F.; Ogassawara, N.; Moszer, I.; Albertini, A.M.; Alloni, G.; Azevedo, V.; Ber C.; Bron, S.; Brouillet, S.; Bruschi, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.;
A.; Ehrlich, S.D.; Emmerson, P.T.; Entian, K.D.; Errington, J.; Fabret, C.; Ferrari, Nature 390, 249-256, 1997
A; Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Galiech, J.; Henaut, A.; Hilbert, H.; Holsappel, S.; Hosono, S.; Hullo, M.; Moetter, P.; Koningstein, G.; Krogh, S.; Kunano, M.; Kurita, K.; Lapidus, A.; Lardino A; Authors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Levine, A.; Liu, H.; Masuda, S.; Mau y, M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portete Rieger, M.; Rivolta, C.; Rocha, E.; Roche, B.; Rose, M.; Sadaie, Y.; Sato, T.; Scanl A; Authors: Schleich, S.; Schroeter, R.; Scoffone, F.; Sekiguchi, J.; Sekowska, A.; Se akeuchi, M.; Tamakoshi, A.; Tanaka, T.; Terpstra, P.; Tognoni, A.; Tosato, V.; Uchiya T.; Winters, P.; Wipat, A.; Yamamoto, H.; Yamane, K.; Yasumoto, K.; Yata, K.; Yoshida A; Authors: Yoshikawa, H.F.; Zumstein, E.; Yoshikawa, H.; Danchin, A.
A; Title: The complete genome sequence of the Gram-positive bacterium Bacillus subtili A; Reference number: A69380; MUID:98044033
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A;Cross-references: GB:M96170; NID:g213501; PIDN:AAA49438.1; PID:g213502 A;Experimental source: orange red variety, embryo A;Note: sequence extracted from the backbone (NCBIN:114769, NCBIP:114770) A;Note: part of this sequence, including the amino end of the mature prote C;Superfamily: astacin; astacin homology
                                                                                                                                                                                                                                                                                  R:Yasumasu, S.; Yamada, K.; Akasaka, K.; Mitsunaga, K.; Iuchi, I.; Shimada, H. Dev. Biol. 153, 250-258, 1992
A;Title: Isolation of cDNAs for LCE and HCE, two constituent proteases of the A;Reference number: A48826; MUID:93012471
A;Accession: B48826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B48826
high choriolytic hatching proteinase (EC 3.4.24.-) HCE23 precursor - Japanese C;Species: Oryzias latipes (Japanese medaka)
C;Date: 01-Dec-1993 #sequence_revision 18-Nov-1994 #text_change 21-Jul-2000
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A;Title: Identification of a gene fragment which codes for the export apparatus in gram-positive and gram-negative bacteria.
A;Reference number: S17771; MUID:91375427
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                                                                                                                                                                                                        A; Molecule type: mRNA; protein A; Residues: 1-270 < YAS>
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A; Residues: 1-841 <KUN>
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A; Residues: 1-125, 'I', 127-364 <0VE>
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A;Cross-references: GB:D10279; DDBJ:D90218; NID:g216332; PIDN:BAA01122.1; PID:g216334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross references: GB:M96171
C;Superfamily: astacin; astacin homology
C;Keywords: glycoprotein; hydrolase; metalloproteinase; zinc
C;Keywords: glycoprotein; hydrolase; metalloproteinase; zinc
F;1-20/Domain: stypnal sequence #status predicted <SIG>
F;21-79/Domain: propeptide #status predicted <PRO>
F;80-279/Product: low choriolytic hatching proteinase #status predicted <MAT>
F;97-279/Domain: astacin homology <AST>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
C48826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Title: Isolation of cDNAs for LCE and HCE, two constituent proteases of the hatching A;Reference number: A48826; MUID:93012471
A;Accession: C48826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Yasumasu, S.; Yamada, K.; Akasaka, K.; Mitsunaga, K.; Iuchi, I.; Shimada, H.; Yamagam
Dev. Biol. 153, 250-258, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
A; Residues: 1-279 < YAS>
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Best Local Similarity 58.3%;
Matches 7; Conservative
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                                                                                                                                             170 CMYSGIIQHELN 181
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F1BB_C1CX
ERR1_YEAST
NEL1_HUMAN
NEL1_HUMAN
NEL1_RAT
SECA_RHOCA
KBF1_MOUSE
RS7_DESMO
HEMO_MANSE
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GUAN_HUMAN
Y175_MYCPN
Y125_MYCPN
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Staphylococcus aureus.
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-83213327; PubMed-6189824; Schmidt J.J., Spero L.; Schmidt J.J., Spero L.; "The complete amino acid sequence of staphylococcal enterotoxin Cl."; J. Biol. Chem. 258:6300-6306(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bohach G.A., Schlievert P.M.;

Nucleotide sequence of the staphylococcal enterotoxin relatedness to other pyrogenic toxins.";

Mol. Gen. Genet. 209:15-20(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE=88038352; PubMed=2823067;
                                                                                                                                                              InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRITOXIN.
                                                                                                                                                                                                                EMBL; X05815; CAA29260.1; -. PIR; A01816; ENSAC1. PIR; S06356; S06356. HSSP; P34071; 18E2.
                                                                                                                                                                                                                                                                                                  or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 28-266.
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                                                                                                     SIGNAL
                                                                                                                     Enterotoxin;
                                                                                                                                   PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISEASE: STAPHYLOCOCCAL ENTEROTOXINS CAUSE THE INTOXICATION STAPHYLOCOCCAL FOOD POISONING SYNDROME.
SIMILARITY: THE DIFFERENT S.AUREUS ENTEROTOXINS AND S.PYOGENES
                                                                                                                                                                                                                                                                                                                                                                                                                                     PYROGENIC EXOTOXINS ARE ALL RELATED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           266 AA;
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(Rel. 13, Last sequence update)
(Rel. 38, Last annotation update)
TYPE C-1 PRECURSOR (SEC1).
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                                     30546 MW;
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YUK4_YEAST
SPR6_YEAST
ASTA_ASTFL
PHSS_DESBA
THRC_BACSU
FIBP_ADE15
YIS4_YEAST
YIS4_YEAST
YKK9_CAEEL
GALY_EAST
TOP1_CAMJE
SYV2_RAT
                                                                                                              Superantigen.
                                    D -> N (IN REF. 2).
; 3A7AB59A8986853B CRC64;
                                                                                    ENTEROTOXIN TYPE C-1.
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Query Match Best Local :

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Similarity

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                                                                                                        InterPro; IPR001961; Staph_Strep_toxin.

Pfam; PF01123; Stap_Strp_toxin; 1.

PRINTS; PR00279; BACTRLTOXIN.

PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.

PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
                                                                                                                                                                                                                                                                          COMPARISON OF STRUCTURE OF SEA AND SEC2.
MEDLINE-97334373; PubMed-9191070;
Schad E.M., Papageorgiou A.C., Svensson L.A., Acharya K.R.;
"A structural and functional comparison of staphylococcal enterotoxins A and C2 reveals remarkable similarity and dissinilarity.";
"Main 1871 060 270 280 100 7
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                                                                        CHAIN
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"Residues defining V beta specificity
enterctoxins.";
                                    METAL
METAL
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01-FEB-1994 (Rel. 28, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
ENTEROTOXIN TYPE C-2 PRECURSOR (SEC2).
  SEQUENCE
             METAL
                           METAL
                                                                                     SIGNAL
                                                                                                                                                                           PDB; 1STE; 23-DEC-96.
PDB; 1SE2; 08-MAR-96.
                                                                                                                                                                                                                                                     J. Mol. Biol. 269:270-280(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=96022987; PubMed=7552730;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Structure 3:769-779(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Staphylococcus aureus reveals a zinc-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brehm R.D., Tranter H.S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Papageorgiou A.C., Acharya K.R., Shapiro R., Passalacqua E.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=96027099; PubMed=7582894;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        enterotoxins C1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bacillus/Staphylococcus group;
NCBI_TaxID=1280;
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Bacteria; Firmicutes; Bacillus/Clostridium group;
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P34071;
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                                                                                                                                                                                                                                                                                                                                                                                                                               X-RAY CRYSTALLOGRAPHY (2.7 ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Crystal structure of the superantigen enterotoxin C2 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Infect. Immun.
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                                                                                                                                                                                                                          STAPHYLOCOCCAL FOOD POISONING SYNDROME. SIMILARITY: THE DIFFERENT S.AUREUS ENTEROTOXINS AND S.PYOGENES
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                                                                                                    Toxin;
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57:2249-2252(1989).
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  WE.
                                                                                                  Superantigen;
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Pred. No. 0.00
1; Mismatches
           ZINC
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                                                                           ENTEROTOXIN TYPE C-2.
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 8407FB18536FAC08 CRC64;
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                                                                                                  Zinc; 3D-structure
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P23313;
01-NOV-1991
01-NOV-1991
15-JUL-1999
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SEQUENCE
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InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
                                                                                                                                                                                                                                      entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                             the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                  Fields B.A., Malchiodi E.L., Li H., Ysern X., Schilevert P.M., Karjalainen K., Mariuzza R.A. "Crystal structure of a T-cell receptor beta-c superantigen.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hovde C.J., Hackett S.P., Bohach G.A.;
"Nucleotide sequence of the staphylococcal enterotoxin C3 gene:
sequence comparison of all three type C staphylococcal
enterotoxins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacteria; Firmicutes; Bacillus/Clostridium group; Bacillus/Staphylococcus group; Staphylococcus. NCBI_TaxID=1280;
                                                                                                            PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
Enterotoxin; Toxin; Signal; Superantigen;
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MEDLINE=97064178; PubMed=8906797;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Staphylococcus aureus.
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                                                                                                  SIGNAL
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10;
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                                                            266 AA;
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120
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(Rel. 20, Last sequence update)
(Rel. 38, Last annotation update)
TYPE C-3 PRECURSOR (SEC3).
Conservative
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Pred. No.
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BY SIMILARITY.
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                                                                                                               3D-structure
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                        Length 266
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CMYGGVTLHEGN 12

В

137

|||||:| |||| CMYGGITKHEGN 148

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COMPARISON OF STRUCTURE OF SEA AND SEC2.

XX MEDLINE-97334373; PUDMed-9191070;

XX SCHAR E.M., Papageorgiou A.C., Svensson L.A., Acharya K.R.;

XY A Structural and functional comparison of staphylococcal

XY A structural and functional comparison of staphylococcal

XY A structural and functional comparison of staphylococcal

XY I STAPHYLOCOCCAL FORD TOTAL STAPHYLOCOCCAL ENTEROTOXINS CAUSE THE INTOXICATION

XYAPHYLOCOCCAL FOOD POISONING SYNDROME.

C -1- MISCELLANGOUS: THIS TOXIN SEEMS TO BE CODED BY A BACTERIOPHAGE.

-1- SIMILARITY: THE DIFFERENT S.AUREUS ENTEROTOXINS AND S.PYOGENES

YYROGENIC EXOTOXINS ARE ALL RELATED.
                                                                                                                                                                                                                                                                                                                                                                                          Abrahmsen L.;
"The Co-crystal structure of staphylococcal enterotoxin type A with En2+ at 2.7-A resolution. Implications for major histocompatibility complex class II binding.";
J. Biol. Chem. 271:32212-32216(1996).
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              the
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Schad E.M., Zaitseva I., Zaitsev V.N., Dohlsten M.,
Schlievert P.M., Ohlendorf D.H., Svensson L.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-8722293; PubMed-3584106;
Huang I.-Y., Hughes J.L., Bergdoll M.S., Schantz E.J.;
"Complete amino acid sequence of staphylococcal enterotoxin
J. Biol. Chem. 262:7006-7013(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-88086892; PubMed-3335483;
Betley M.J., Mekalanos J.J.;
"Nucleotide sequence of the type A staphylococcal enterotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JAN-1990
15-JUL-1999
                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                             Nat. Struct. Biol. 2:680-686(1995).
                                                                                                                                                                                                                                                                                                          enterotoxins."
                                                                                                                                                                                                                                                                                                                          Swaminathan S., Furey W.F. Jr., Pletch *Residues defining V beta specificity
                                                                                                                                                                                                                                                                                                                                                        MEDLINE-96022987; PubMed-7552730;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sundstroem M., Hallen D., Svensson A., Schad E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-97113025; PubMed-8943278;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBO J. 14:3292-3301(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bacillus/Staphylococcus
NCBI_TaxID=1280;
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                                                                                                                                                                                                                                                                                                                                                                        3D-STRUCTURE MODELING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              K-RAY CRYSTALLOGRAPHY (2.7 ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Crystal structure of the superantigen staphylococcal enterotoxin
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European Bioinformatics Institute. The by non-profit institutions as long
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Rel. 13, Created)
(Rel. 13, Last sequence update)
(Rel. 38, Last annotation updat
TYPE A PRECURSOR (SEA).
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staphylococcal
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Best Local S
Matches 10
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01-JAN-1990
15-JUL-1999
ENTEROTOXIN
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SEQUENCE
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METAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-slb.ch/announce/or send an email to license@isb-slb.ch).
                                                                                                                                                                                                                                                                      Staphylococcus aureus.
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.
NCBI_TaxID-1280;
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          the
                                                                                                                     MEDLINE=96022987; PubMed=7552730;
Swaminathan S., Furey W.F. Jr., Pletcher
Residues defining V beta specificity in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                   <del>:</del>
                                                                                                              enterotoxins.";
                                                                                                                                                                                          enterotoxin gene
                                                                                                                                                                                                               Couch J.L.,
                                                                                                                                                                                                                                         STRAIN-MJB265
                                                                                                                                                                                                                                                 SEQUENCE FROM N.A., AND SEQUENCE OF
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                                                                                                                                                         3D-STRUCTURE MODELING
                                                                                                                                                                                                    Couch J.L., Soltis M.T., Betley M.J.; "Cloning and nucleotide sequence of t
                                                                                                                                                                                                                            MEDLINE-88257005; PubMed-3384800;
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                                                                                                                                                                                                                                                                                                                                                                                                                                            130 CMYGGVTLHDNN 141
                                                                                                                                                                                Bacteriol. 170:2954-2960(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CMYGGVTLHEGN
                                                                 . Struct. Biol. 2:680-686(1995).
DISEASE: STAPHYLOCOCCAL ENTEROTOXINS CAUSE THE INTOXICATION
STAPHYLOCOCCAL FOOD POISONING SYNDROME.
SIMILARITY: THE DIFFERENT S.AUREUS ENTEROTOXINS AND S.PYOGENES
European Bioinformatics Institute. The by non-profit institutions as long
                                                       PYROGENIC EXOTOXINS ARE ALL RELATED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1SEA; 15-OCT-95.
1SXT; 19-NOV-97.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A29566; A29566.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
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(Rel. 13, Last sequence update)
(Rel. 38, Last annotation updat
TYPE E PRECURSOR (SEE).
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Pred. No.
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            There
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staphylococcal
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SPEA_STRPY
SPEA_STRPY
P08095;
p08095
01-AUG-1988 (Rel. 08, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
30-MAY-2000 Rel. 39, Cast annotation update)
                                                                                                                                                                                                                                                                        X-RAY CRYSTALLOGRAPHY (2.57 ANGSTROMS).

MEDLINB-99094887; PubMed-9878045;

Papageorgiou A.C., Collins C.M., Gutman D.M., Kline J.B.,

Papageorgiou A.C., Collins C.M., Gutman D.M., Kline J.B.,

O'Brien S.M., Tranter H.S., Acharya K.R.;

"Structural basis for the recognition of superantigen streptococcal

pyrogenic exotoxin A (SpeA1) by MHC class II molecules and T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=86284313; PubMed=3526093; Johnson L.P., L'Italien J.J., Schlievert P.M.; Johnson L.P., L'Italien J.J., Schlievert P.M.; "Streptococcal pyrogenic exotoxin type A (scarlet related to Staphylococcus aureus enterotoxin B.", Mol. Gen. Genet. 203:354-356(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (erythrogenic
T12.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE-86166804; PubMed-3514452;
Weeks C.R., Ferretti J.J.;
"Nucleotide sequence of the type A streptococcal exotoxin."
                                                                                                                                                                                                                                                       receptors
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PRINTS; PR00279; BACTRLTOXIN,
PROSITE: PS00277: STAPH_STREP_TOXIN_1;
PROSITE: PS00278: STAPH_STREP_TOXIN_2;
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PIR; A28179; A28179.
PDB; 1SEE; 15-OCT-95.
InterPro; IPR001961; Staph_Strep_toxin.
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MISCELLANEOUS: THIS TOXIN SEEMS TO I
SIMILARITY: THE DIFFERENT S.AUREUS I
PYROGENIC EXOTOXINS ARE ALL RELATED
                                                                                                       DISEASE: THE STREPTOCOCCAL PYROGENIC TOXINS A, B, AND C ARE THE CAUGATIVE AGENTS OF THE SYMPTOMS ASSOCIATED WITH SCARLET FEVER, HAVE BEEN ASSOCIATED WITH STREPTOCOCCAL TOXIC SHOCK-L. DISEASE AND MAY PLAY A ROLE IN THE EARLY EVENTS OF RHEUMATIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immun. 52:144-150(1986).
                                                                                                                                                                                                                             18:9-21(1999).
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Pred. No.
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                            ENTEROTOXINS
                                                         BE CODED BY BACTERIOPHAGE
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                               S.PYOGENES
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SHOCK-LIKE
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                    Ranelli D.M., Jones C.L., Johns M.B., Mussey G.J. "Molecular cloning of staphylococcal enterotoxin Escherichia coli and Staphylococcus aureus."; Proc. Natl. Acad. Sci. U.S.A. 82:5850-5854(1985).
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                                                                                                                                SEQUENCE OF 40-91
MEDLINE=85298255;
                                                                                                                                                                                                                                                  aureus."
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                                                                                                                                                                                                                                                                                                          Jones C.L.,
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InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
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PROSITE; PS00278; STAPH_STREP_TOXIN_2;
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PubMed=3898073;
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Papageorgiou A.C., Tranter H.S., Acharya K.R.;
"Crysteal structure of microbial superantigen staphylococcal enterotoxin B at 1.5-A resolution: implications for superant recognition by MHC class II molecules and T-cell receptors.

J. Mol. Biol. 277:61-79(1998).

--- DISCASE: STAPHYLOCOCCAL ENDEROTOXINS CAUSE THE INTOXICA'STAPHYLOCOCCAL FOOD POISONING SYNDROME.

--- SIMILARITY: THE DIFFERENT S.AUREUS ENTEROTOXINS AND S.P. PYROGENIC EXOTOXINS ARE ALL RELATED.
                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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"The primary structure of staphylococcal enterotoxin B. cyanogen bromide peptides of reduced and aminoethylated B, and the complete amino acid sequence.";
J. Blol. Chem. 245:3518-3525(1970).
                                                                                                                               InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
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MEDLINE-99096298; PubMed-9881971;
Li H., Llera A., Tsuchiya D., Leder L.
Karjalainen K., Mariuzza R.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jardetzky T.S., Brown J.H., Gorga J.C., Stern L.J., Urban R.G., Chi Y.I., Stauffacher C., Strominger J.L., Wiley D.C.; "Three-dimensional structure of a human class II histocompatibility molecule complexed with superantigen.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS).
MEDLINE=93063291; PubMed=1436058;
Swaminathan S., Furey W.F. Jr., Pletcher J.,
"Crystal structure of staphylococcal enteroto"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X-RAY CRYSTALLOGRAPHY (1.5 ANGSTROMS).
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2SEB; 28-JAN-98.

3SEB; 27-MAY-98.

1SEB; 16-JUN-97.

1SEA; 15-OCT-97.

1SBB; 04-MAR-99.
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A01815; ENSAB6.
S27360; S27360.
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                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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STRAIN=ATCC 23235;
MEDLINE=97157473; Pu
                                                                           EMBL; M28521; AAB06195.1; -.
PIR; A33953; A33953.
HSSP; P13163; ISXT.
InterPro; IPR001961; Staph_Strepfam; PF01123; Stap_Strp_toxin;
PRINTS; PR00279; BACTRLTOXIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. MEDLINE=89359112; PubMed=2549000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Staphylococcus aureus. Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STAAU
                                           Enterotoxin;
                                                                                                                                                                                                                                                              -;
                                                                                                                                                                                                                                                                                    -!- SUBUNIT: HOMODIMER; ZINC-DEPENDENT.
-!- DISEASE: STAPHYLOCOCCAL ENTEROTOXINS CAUSE
                                                                                                                                                                                                                                                                                                                                                      Sundstroem M., Abrahmsen
                                                                                                                                                                                                                                                                                                                                                                                                                         enterotoxin D
                                                                                                                                                                                                                                                                                                                                                                                                                                    Bayles K.W., Iandolo J.J.; "Genetic and molecular analyses of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacillus/Staphylococcus
NCBI_TaxID=1280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ETXD_STAAU
                                                     PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
                                                                                                                                                                                                                                                                                                                                            Dohlsten M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140
                                                                                                                                                                                                                                                                                                                                                                                                              Bacteriol. 171:4799-4806(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CMYGGVTLHEGN
                                                                                                                                                                                                                                                             STAPHYLOCOCCAL FOOD POISONING SYNDROME. SIMILARITY: THE DIFFERENT S.AUREUS ENTEROTOXINS AND
                                                                                                                                                                                                                                                   PYROGENIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CMYGGVTEHNGN 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Rel. 17, Created)
(Rel. 17, Last sequence up
(Rel. 38, Last annotation
TYPE D PRECURSOR (SED).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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156
185
233
246
                                            Toxin;
                                                                                                                                                                                                                                                 EXOTOXINS ARE ALL RELATED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                  PubMed=9003758;
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; Signal;
25
258
212
210
250
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156
186
233
247
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                                                                                        Staph_Strep_toxin.
Strp_toxin; 1.
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                                          Superantigen;
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                                                                                                                                                                                                                                                                                                                                                       Antonsson P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 59; DB 1;
Pred. No. 0.0044;
 ZINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Y NG
                      ENTEROTOXIN TYPE D
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> YY (IN REF. 3).
-> EQ (IN REF. 3).
> N (IN REF. 3).
-> ND (IN REF. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
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                                                                                                                                                                                                                                                                                                                                enterotoxin
                                                                                                                                                                                                                                                                                                                                                       Mehindate K., Mourad W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   group;
                                                                                                                                                                                                                                                                                                                                                                                                                                     encoding
                                                                                                                                                                                                                                                                                                                                                                                        (2.3
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                                                                                                                                                                                                                                                                                     THE
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                                                                                                                                                                                                                                                                                     INTOXICATION
                                                                                                                                                                                                                                                                                                                                                                                        ANGSTROMS)
                                                                                                                                                                                                                                                                                                                                type
                                                                                                                                                                                                                                                                                                                                                                                                                                    staphylococcal
                                                                                                                                                                                                                                                              S. PYOGENES
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RESOLUTION ACCORDANCE SERVICE 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RRP SEQUENCE OF 1-364 FROM N.A.

RC STRAIN-ATCC 6057;

RX MEDLINE-91375427; pubMed=1832735;

RA Overhoff B., Klein M., Spies M., Freudl R.;

"Identification of a gene fragment which codes for the 364 amino-
ref terminal amino acid residues of a SecA homologue from Bacillus

RT subtilis: further evidence for the conservation of the protein export

RT subtilis: further evidence for the conservation of the protein export

RT subtilis: further evidence for the conservation of the protein export

RT subtilis: further 28:417-423(1991).

RL MO1. Gen. Genet. 228:417-423(1991).

C :- FUNCTION: INVOLVED IN PROTEIN EXPORT. INTERACTS WITH THE SECY/SECE

CC SUBUNITS. SECA HAS A CENTRAL ROLE IN COUPLING THE HYDROLYSIS OF

CC SUBUNITS. SECA HAS A CENTRAL ROLE IN COUPLING THE HYDROLYSIS OF

CC MEMBRANE PROTEINS ACROSS THE MEMBRANE.

CC MEMBRANE PROTEIN SECA, SECB, SECE, SECF, SECG AND SECY

CO MEMBRANE PROTEINS SECA, SECB, SECE, SECF, SECG AND SECY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SECA_BACSU
P28366;
01-DEC-1992
01-DEC-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                METAL
VARIANT
SEQUENCE
                                                                                                                                                    the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-slb.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN=168 / MARBURG;
MEDLINE-91192600; PubMed-1901557;
MEDLINE-91192600; PubMed-1901557;
Sadaie Y., Takamatsu H., Nakamura K., Yamane K.;
Sequencing reveals similarity of the wild-type
subtilis to the Escherichia coli secA gene.";
Gene 98:101-105(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bacillus subtilis.
Bacteria; Firmicutes; Bacillus/Staphylococcus
                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Soldo B., Lazarevic V.,
Submitted (JAN-1997) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SECA OR DIV+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-DEC-1992 (Rel. 24, Created)
01-DEC-1992 (Rel. 24, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation updat.
PREPROTEIN TRANSLOCASE SECA SUBUNIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BACSU
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              131 CTYGGVTPHEGN 142
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                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: BELONGS TO THE SECA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUBCELLULAR LOCATION: CYTOPLASMIC SIDE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CYTOPLASMIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (BY SIMILARITY)
                                                                     U56901;
                                                                                                   D10279;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
10; Conserv
                                                                                                                                                                                                                                                                                                                the Swiss Institute of Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                252
114
258 AA;
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BAA01122.1; -.; AAC44957.1; -.; CAA43977.1; -.; CAB15547.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                252
114
29746
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bacillus/Clostridium us group; Bacillus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mauel C., Karamata D.;
the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MW;
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Pred. No. 0.0063;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -> A (IN STRAIN ATCC 23235). 4F7C6A28D42597FD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=93012471; PubMed=139/004; Yasumasu S., Yamada K., Akasaka K., Mitsunaga K., Tuchi I., Shimada H., Yamagami K.; Shimada H., Yamagami K.; Tisolation of cDNAs for LCE and HCE, two constituent proteases of the "Isolation of cDNAs for LCE and HCE, and concurrent expression of
                                                                                                                                                                                                       -
                                                                                                                                                                                                                                                                                     hatching enzyme of Oryzias latipes, and concurrent expression of their mrnas during development.";

Dev. Biol. 153:250-258(1992).

-i- FUNCTION: PARTICIPATES IN THE BREAKDOWN OF THE EGG ENVELOPE, WHICH IS DERIVED FROM THE EGG EXTRACELLULAR MATRIX, AT THE TIME OF HATCHING. THUS ALLOWING THE NEWLY HATCHED FISH TO SWIM FREE. HCE BINDS TIGHTLY TO THE EGG ENVELOPE WHILE IT EXERTS THE CHORTOLYTIC SWELLING ACTION.

-i- CATALYTIC ACTIVITY: HYDROLYSIS OF THE INNER LAYER OF FISH EGG ENVELOPE. ALSO HYDROLYSES CASEIN AND SMALL MOLECULE SUBSTRATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Embryo;
MEDLINE=93012471;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oryzias latipes (Medaka fish).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha;
Beloniformes; Adrianichthyidae; Oryziinae; Oryzias.
NCBI_TaxID-8090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HCEI_CRYLA STANDARD; PRT; 270 AA.

P31580;
01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
01-NOV-1995 (Rel. 32, Last annotation update)
HIGH CHORIOLYTIC ENZYME 1 PRECURSOR (EC 3.4.24.67) (HATCHING ENZYME ZINC-PROTEASE HCE 1 SUBUNIT) (CHORIOLYSIN H 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORYLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HCE 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00906; SECA.
PROSITE; PS01312; SECA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000185; Seca.
Pfam; PF01043; Seca_protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A., AND SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Protein transport; ATP-binding; Membrane; Translocation; Transport;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SubtiList; BG10741;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UP_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Complete proteome.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 MYGGVTLHEGN 12
                                                                                                               DEVELOPMENTAL STAGE: PRODUCTION OF THE PROTEIN STARTS IN DAY 2 TO DAY 3 EMBRYOS AND INCREASES THEREAFTER UNTIL HATCHING. PTM: O-GLYCOSYLATED (PROBABLE).
MISCELLANDOUS: IN MEDAKA THE HATCHING ENZYME SYSTEM IS COMPOSED TWO DISTINCT PROTEASES, THE HIGH CHORIOLYTIC ENZYME (HCE), OF WHICH THERE ARE TWO ISOFORMS, AND THE LOW CHORIOLYTIC ENZYME
                                                                                                                                                                                                                                     SUCH AS SUC-LEU-LEU-VAL-TYR-|-MCA. COFACTOR: BINDS ONE ZINC ION. SUBCELLULAR LOCATION: STORED AS PR
                                                            SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12A (ZINC METALLOPROTEASE); ALSO KNOWN AS THE ASTACIN SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LMGGVALHDGN 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JQ0647; JQ0647.
S17771; S17771.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100
126
841 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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126
v
95530 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60.6%;
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Pred.
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V -> I (IN REF. 3); 9AAC3630139F5EFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                       AS PROENZYMES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.
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7.4;
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                                                                                                                                                                                                                                                                                                                                                          FREE.
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Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                HCE2_ORYLA STANDARD; PRT; 279 AA.
p31581;
01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
01-NOV-1995 (Rel. 32, Last annotation update)
HIGH CHORIOLYTIC ENZYME 2 PRECURSOR (EC 3.4.24.67)
ZINC-PROTEASE HCE 2 SUBUNIT) (CHORIOLYSIN H 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PRO0480; ASTACIN.

PRINTS; PRO0480; ASTACIN.

SMART; SM00235; ZnMC; 1.

PROSITE; PS00142; ZINC_PROTEASE; 1.

PROSITE; PS00142; ZINC_PROTEASE; 1.

PROSITE; PS00142; ZINC_PROTEASE; 1.
                                                                                                                                                                                              TISSUE-Embryo:
MEDLINE-93012471; PubMed-1397682;
MEDLINE-93012471; PubMed-1397682;
Yasumasu S., Yamada K., Akasaka K., Mesumasu S., Yamadami K.;
Shimada H., Yamagami K.;
"Isolation of cDNAs for LCE and HCE,"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORYLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACT_SITE
                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleos Actinopteryg11; Neopteryg11; Teleostei; Euteleostei; Neoptere Acanthomorpha; Acanthopteryg11; Percomorpha; Atherinomorpha; Beloniformes; Adrianichthyidae; Oryzinae; Oryzias.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    use by non-profit institutions as long a modified and this statement is not removed. entitles requires a license agreement (See lor send an email to license@isb-sib.ch).
                                                                                                                                                     hatching enzyme of Oryzias latipes, and concurrent expression their mRNAs during development.";
Dev. Biol. 153:250-258(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEROPS; M12.007; -.
InterPro; IPR001506; Astacin.
InterPro; IPR00130; Zn_MTpeptdse.
Pfam; PF01400; Astacin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; M96170; AAA494; PIR; B48826; B48826.
                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                          NCBI_TaxID=8090;
                                                                                                                                                                                                                                                                                                                                                                               Oryzias latipes (Medaka fish).
                                                                                                                                                                                                                                                                                                                                                                                              HCE 21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        161 CMYSGIIQHELN 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CMYGGVTLHEGN 12
      FUNCTION. PARTICIPATES. IN THE BREAKDOWN OF THE EGG ENVELOPE, WHICH IS DERIVED FROM THE EGG EXTRACELLULAR MATRIX, AT THE TO FEMALE AND THE THE ATTENTION.

OF HATCHING. THUS ALLOWING THE NEWLY HATCHED FISH TO SWIM FRINCE BINDS TIGHTLY TO THE EGG ENVELOPE WHILE IT EXERTS THE CHORIOLYTIC SMELLING ACTION.

CATALYTIC ACTIVITY: HYDROLYSIS OF THE INNER LAYER OF FISH EGG ENVELOPE. ALSO HYDROLYSIS CASEIN AND SMALL MOLECULE SUBSTRATISCH AS SUC-LEU-LEU-VAL-TYR-|-MCA.

COPACTOR: BINDS ONE ZINC ION.

SUBCELLULAR LOCATION: STORED AS PROENZYMES IN THE ZYMOGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         270
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71
169
170
173
173
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA49438.1; -.
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270
270
169
170
173
173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30392 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTIVATION PEPTIDE.
HIGH CHORIOLYTIC ENZYME 1.
ZINC (CATALYTIC) (BY SIMILARITY).
BY SIMILARITY.
ZINC (CATALYTIC) (BY SIMILARITY).
ZINC (CATALYTIC) (BY SIMILARITY).
N-LINKED (GLCNAC. . . ) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 42; DB Pred. No. 3.8; 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        D85C972906E3735A CRC64;
                                                                                                                                                                                                                                K., Mitsunaga K.,
                                                                                                                                                                                                   two constituent proteases of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .8
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                                                     R LAYER OF FISH EGG
MOLECULE SUBSTRATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 270
                                                                                                                                                                                                                              Iuchi
                                                                                                                                                                                                                                                                                                                                                                                                                        (HATCHING
                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
; Neoteleostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   by
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                                                      SUBSTRATES
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Best Local
                                                                                                                                                                                                            15-JUL-1998
20-AUG-2001
PREPROTEIN TI
"The structure and gene repertoire of an ancier genome.";
J. Mol. EVENOL. 51:382-390(2000).
-I- FUNCTION: INVOLVED IN PROTEIN EXPORT AND IN CENTRAL ROLE IN COUPLING THE HYDROLYSIS OF PRE-SECRETORY PROTEINS ACROSS THE MEMBRANE.
                                                                                                                                                                                               SECA
                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACT_SITE
METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <del>-</del> <del>-</del> <del>-</del> -
                                                                     MEDLINE=20496959; PubMed=11040290; Gloeckner G., Rosenthal A., Valentin
                                                                                                                                                                        Cyanidium caldarium. Chloroplast.
                                                                                                                                                                                                                                                           SECA_CYACA
019911;
                                                                                                                                                                                                                                                                                     CYACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00480; ASTAC SMART; SM00235; ZnMC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEROPS; M12.007; -.
InterPro; IPR001506; Astacin.
InterPro; IPR000130; Zn_MTpeptdse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; M96171; AAA49439.1; -. HSSP; P07584; 1IAD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -
                                                                                                 STRAIN-RK-1
                                                                                                                                                 Eukaryota;
Cyanidium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SMUU433; 4..... - PROTEASE; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF01400; Astacin;
                                                                                                           SEQUENCE FROM N.A
                                                                                                                                  NCBI_TaxID=2771;
                                                                                                                                                                                                                                               15-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROPEP
                                                                                                                                                                                                                                                                                                                                      170 CMYSGIIQHELN 181
                                                                                                                                                                                                                                                                                                                                                             1 CMYGGVTLHEGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PTM: O-GLYCOSYLATED (PROBABLE).
MISCELLANEOUS: IN MEDAKA THE HATCHING ENZYME SYSTEM
TWO DISTINCT PROTEASES, THE HIGH CHORIOLYTIC ENZYME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEVELOPMENTAL STAGE: PRODUCTION OF THE PROTEIN STARTS IN DAY 2 TO DAY 3 EMBRYOS AND INCREASES THEREAFTER UNTIL HATCHING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            METALLOPROTEASE); ALSO KNOWN AS THE ASTACIN SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: BELONGS TO PEPTIDASE FAMILY M12A (ZINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WHICH THERE ARE TWO ISOFORMS,
                                                                                                                                                                                                                                                                                                                                                                                     Similarity
7; Conser
                                                                                                                                                            Rhodophyta;
                                                                                                                                                                                                              TRANSLOCASE
                                                                                                                                                                                                        (Rel. 36, Created)
(Rel. 36, Last sequence update)
(Rel. 40, Last annotation updat
TRANSLOCASE SECA SUBUNIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
80
178
179
182
188
                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                        STANDARD;
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79
279
178
179
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188
62
31490
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                                                                                                                                                                                                                                                                                                                                                             12
                                                                                                                                                                                                                                                                                                                                                                                                  59.2%;
58.3%;
                                                                                                                                                           Bangiophyceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                HIGH CHORIOLYTIC ENZYME 2.

ZINC (CATALYTIC) (BY SIMILARITY).

BY SIMILARITY.

ZINC (CATALYTIC) (BY SIMILARITY).

ZINC (CATALYTIC) (BY SIMILARITY).

ZINC (CATALYTIC) (BY SIMILARITY).

N-LINKED (GLCNAC. . .) (POTENTIAL).

MW; 00244107A8B01B8C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                     Score 42; DB Pred. No. 3.9; 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                      1;
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                                                                                                                                                                                                                                                                        PRT;
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                                                         K.;
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                                                                                                                                                            Porphyridiales; Porphyridiaceae;
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          OF ATP TO
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                                                                                                                                                                                                                                                                                                                                                                                                            Length 279
                                                            red
                                                          algal
              THE
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           TRANSFER
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                                                           plastid
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RESULT
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Best Local
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Q02020;
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                                                                                                                                                                                                                                                                                                                                                       Cleavage site.";
Blochemistry 30:3290-3294(1991).
FUNCTION: FIBRINGEN HAS A DOUBLE FUNCTION: YIELDING MONOMERS
FOLYMERIZE INTO FIBRIN AND ACTING AS A COFACTOR IN PLATELET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FGB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
FIBRINOGEN BETA CHAIN PRECURSOR (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein transport; ATP-binding; Chloroplast; Translocation; NP_BIND 105 112 ATP (BY SIMILARITY). SEQUENCE 895 AA; 103753 NW; DB290CFD201EADBC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; AF022186; AAB82678.1; -. InterPro; IPR000185; SecA. Pfam; PF01043; SecA_protein; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                           This
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                                                                                                                                                                                                                                                                                                                        -
                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A., AND SEQUENCE OF 1-13 AND 18-39.
MEDLINE=91182745; PubMed=2009266;
Weissbach L., Oddoux C., Procyk R., Grieninger G.;
"The beta chain of chicken fibrinogen contains an atypical thrombin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gallus gallus (Chicken).
Eukaryota; Metazoa; Chor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00906; SECA.
PROSITE; PS01312; SECA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Archosauria; Aves; Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    + +
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 MYGGVTLHEG 11
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                                                                                                                                                                                                                                                                 (ALPHA, BETA, & GAMMA), LINKED TO EACH OTHER BY DISULFIDE BONDS MISCELLANEOUS: CONVERSION OF FIBRINGEN TO FIBRIN IS TRIGGERED THROMBIN, WHICH CLEAVES FIBRINOPEPTIDES A AND B FROM ALPHA & BE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: CHLOROPLAST.
SIMILARITY: BELONGS TO THE SECA FAMILY.
                                                                                                                                         SIMILARITY: CONTAINS 1 FIBRINOGEN C-TERMINAL DOMAIN.
                                                                                                                                                                                            CHAINS, AND THUS EXPOSES THE N-TERMINAL POLYMERIZATION SITES RESPONSIBLE FOR THE FORMATION OF THE SOFT CLOT. THE SOFT CLOT IS CONVERTED INTO THE HARD CLOT BY FACTOR XIIIA WHICH CATALYZES THE EPSILON-(GAMMA-GLUTAMYL)LYSINE CROSS-LINKING BETWEEN GAMMA CHAINS
                                                                                                                                                                                                                                                                                                                      SUBUNIT: HEXAMER CONTAINING 2 SETS OF 3 NONIDENTICAL CHAINS
                                                                                                                                                                                                                                                                                                                                          AGGREGATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MIGGIVLHEG
                                                                                     SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHICK
                                                                                                                                                                           STRONGER) AND BETWEEN ALPHA CHAINS (WEAKER) OF DIFFERENT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata; Craniata; Vertebrata; Euteleostomi;
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70
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Galliformes;
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the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as Instructions as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                           This
                                                                                                 significance of sub-telomeric repeat sequences.";
Yeast 11:371-382(1995).
-!- CATALYTIC ACTIVITY: 2-PHOSPHO-D-GLYCERATE = DUCCESTORM
                                                                                                                                         MEDLINE-95304851; PubMed-7785338;
Pryde F.E., Huckle T.C., Louis E.J.;
"Sequence analysis of the right end of chromosome XV in
cerevisiae: an insight into the structural and functiona
                                                                                                                                                                                                                         STRAIN=S288C / AB972;
Churcher C.M., Louis
Submitted (NOV-1995)
                                                                                                                                                                                                                                                                                                                                        01-NOV-1995 (Rel. 32, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
ENOLASE RELATED PROTEIN 1 (EC 4.2.1.11).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
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SMART; SM00186; FBG; 1.
                                                                                                                                                                                        SEQUENCE OF 120-437 FROM N.A. STRAIN=S288C / YP1;
                                                                                                                                                                                                                                                                                                       Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
                                                                                                                                                                                                                                                                                                                                ERR1 OR YMR323W OR YM9924.
                                                                                                                                                                                                                                                                                                                                                                                           ERR1_YEAST P42222;
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                                                                                                                                                                                                                                                              SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                               Saccharomycetales;
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                                               between
                                                                                 -!- SIMILARITY: BELONGS TO THE ENOLASE FAMILY.
                                                                                                                                                                                                                                                                                   NCBI_TaxID=4932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              328 LYGGFTIHNEGN 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 MYGGVTLH-EGN 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N58514; AAA48770.1;
A38463; A38463.
                                                          SWISS-PROT entry is copyright. It is produced through a collaboration
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                                                                                              H(2)0
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                                              the Swiss Institute of Bioinformatics and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR002181;
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463 AA;
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201
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17
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80
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197
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410
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52678
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463
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18
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                                                                                                                                                                                                                                      E.J.,
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66.7%;
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N-LINKED (GLCNAC. . .) (POT
NH. 2044CD49BA79EC7B CRC64;
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INTERCHAIN
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Pred. No. 7
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SULFATION (BY SIMILARITY)
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Pfam; PF00111; C...
PRINTS; PR00148; ENOLASE.
A ProDom; PD000902; Enolase; 1.
A PROSITE; PS00164; ENOLASE; 1.
AW Lyase; Glycolysis; Magnesium.
FT ACT_SITE 160 B'
FT METAL 247 247
METAL 296 296
FT METAL 321 321
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Best Local S
Matches 6
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EMBL; U23472; AAC48992.1; -.
HSSP; P00924; INEL.
SGD; S0005920; ERR1.
InterPro; IPR000941; Enolase.
Pfam; PF00113; enolase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        NELL_HUMAN STANDARD; PRT; 810 AA. 0924832; 097472; 01-NOV-1997 (Rel. 35, Created) 20-AUG-2001 (Rel. 40, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) PROTEIN KINASE C-BINDING PROTEIN NELL1 PRECURSOR (NEL-RELATED PROTEIN 1).
                                                                                             Ting
                                                                                                                                                                                                                                                                 TISSUE-Brain;
MEDLINE-97131504; PubMed-8975702;
Mattanabe T.K., Katagiri T., Suzuki M., Shimizu F., Fujiwara Wattanabe T.K., Katagiri T., Suzuki M., Shimizu F., Fujiwara Watenabo N., Nakamura Y., Hirai Y., Maekawa H., Takahashi E. "Cloning and characterization of two novel human cDNAs (NELL NELL2) encoding proteins with six EGF-like repeats."; Genomics 38:273-276(1996).
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                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HUMAN
                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
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                                                                                                                                                                                                                                                                                                                                                                         EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CMYGGVTLHEGN 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                             ×.
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6; Conservative
                                                                                                                                                                                                                                          OF 383-810 FROM N.A. Vastardis H., Mulliken J.B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      57.7%;
50.0%;
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Pfam; PFO
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SIGNAL
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U57523;
P07204;
602319;
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SM00001; EGF_like; 4
SM00202; LamG; 1.
SM00210; TSPN; 1.
SM00214; VWC; 3.
SM00214; VWC_def; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; IPR001881; EGF_Ca.
; IPR001791; Laminin_G.
; IPR003129; TSPN.
; IPR001007; VWFC.
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IPR000561;
              ; BAA11680.1;
; AAB06946.1;
; 2ADX.
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 AA;
                         Asx_hydroxyl.
EGF-like.
EGF_Ca
89606 MW;
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EGF-LIKE 5, CALCIUP
EGF-LIKE 5, CALCIUP
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EGF-LIKE
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  549465EA3F7AEED0
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  CRC64;
                                               (POTENTIAL).
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RESULT

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Result
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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 protein search, using
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length: 2000000000
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Match
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10:
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BLOSUM62
Gapop 10.0 ,
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71
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CMYGGVTLHEGN 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version Copyright (c) 1993 - 2000
                                                                                                                                                                                                                                                                                                     sp_mammal: *
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                                                                                                                                                                                                                                                                                                                                     sp_archea:*
sp_bacteria:*
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                                                                                                                                                                                                                                                                                     sp_organelle:*
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                                                                                                                                                                                                                                                                                                                      sp_human:*
                                                                                                                                                                                                                                     sp_vertebrate:*
sp_unclassified:*
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sp_rodent:*
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     Ojezma staphylococ
Ojesus staphylococ
Ojesta staphylococ
Ojesza streptococc
Ojesza streptococc
Ojesza streptococc
Ojesza streptococc
Ojesza streptococc
                                                             085217 staphylococ

09r5x4 staphylococ

005157 staphylococ

053678 staphylococ

006531 staphylococ

006532 staphylococ

006533 staphylococ

006534 staphylococ

006535 staphylococ

09f016 staphylococ

09ezm4 staphylococ
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	- 21	20
39	39	39	39	39	39	40	40	40	40	40	41	41	41	41	41	42	44	44	47	51	51	51	52	52	58
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Q9APG7	Q9APG5	Q44099	066049	Q9JWR7	Q9EW93	Q9NZC0	085382	Q9EZM3	Q9ZNF2	Q53585	Q9BY58	Q9NYE6	Q12007	Q9NWL4	Q9A5S5	013116	Q99ZZ1	Q9L921	Q99TP7	Q54739	Q54971	Q54738	Q9EZM8	Q99T46	Q52075
Q9apg7		244099	Φ	Q9jwr 7	Q9ew93	Q9nzc0	085382	Q9ezm3	Q9znf2			Q9nye6	Q12007	Q9nwl4	Q9a5s5	013116	Q99zz1	Q91921		Q54739	71	Q54738	Q9ezm8	Q99t46	Q520 7 5
anaplasma m	anaplasma m	anaplasma m	enterobacte	bacillus ha	streptomyce	homo sapien	staphylococ	staphylococ	staphylococ	staphylococ	homo sapien	homo sapien	saccharomyc	homo sapien	caulobacter	6 oryzias lat	streptococc	streptococc	staphylococ	streptococc	streptococc	streptococc	staphylococ	\sim	plasmid pib

ALIGNMENTS

PRELIMINARY;

PRT;

268

RESULT OR SECUTION OF SECUTION 085217 085217; 01-NOV-1998; 01-NOV-1998; 01-JUN-2001; Plasmid pIB485.
Bactleria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.
NCBI_TaxID-1280; ENTEROTOXIN Staphylococcus aureus. 3 (TrEMBLrel. 08, 3 (TrEMBLrel. 08, [TrEMBLrel. 17, ٦. Created)
Last sequence update)
Last annotation update)

SEQUENCE FROM N.A.

STRANN-KSI1410;
STRANN-KSI1410;
STRANN-KSI1410;
STRANN-KSI1410;
STRANN-KSI1410;
STRANN-KSI1410;
STRANN-KSI1410;
STRANN-KSI1410;
The enterotoxin D plasmid of Staphylococcus aureus encodes a second enterotoxin determinant (sej).";
Submitted (MAR-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AF053140; AAC78590.1;
EMBL; AF053140; AAC78590.1;
HSSP; P13163; IESF:
InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Staph_Strep_toxin; 1.
PRINTS; PR00279; BACTRUTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.

Matches Query Match Best Local PROSITE; PROSITE; Plasmid. SEQUENCE Similarity 268 AA; Conservative 31230 MW; 91.5%; 91.7%; 0; Score 65; DB 2; Pred. No. 0.00061; 0; Mismatches 1 AC5F3546060ACE22 CRC64; Length 268 Indels

0;

Gaps

0

В δ 130 CMYGGVTLHENN 1 CMYGGVTLHEGN 141 12

RESULT

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RESULT
OC 5157
ID CO 5157
AC OC DT 0
DT 0
DT 0
DT 0
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01-JUN-2001 (TEMBLIEL 17, La
ENTEROTOXIN-PYROGENIC TOXIN.
Staphylococcus.
Bacteria. Tr
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Berger P.H., Kapur V., Stauffacher C.V., Bohach G.A.;
Submitted (FEB-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; U91526; AAB50248.1; -.
INTERING IPRO01961; Staph_Strep_toxin.
InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSITE; PS00279; BACTRLTOXIN.
PROSITE; PS00279; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00279; STAPH_STREP_TOXIN_2; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
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01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
TYPE C ENTEROTOXIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9R5X4;
Q9R5X4;
Q1-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. STRAIN-95-011195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacillus/Staphylococcus group; Staphylococcus. NCBI_TaxID=1285;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Staphylococcus intermedius.
Bacteria: Firmicutes: Bacillus/Clostridium group:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; P34071; ISE2.
InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
SEQUENCE 234 AA; 27122 MW; D6A7B45FB9810052 CRC64;
                                                                                                            110 CMYGGITKHEGN 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Van den Bussche R.A., Lyon J.D., Bohach
Mol. Phylogenet. Evol. 2:281-292(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE=94325995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacteria; Firmicutes; Bacillus Bacillus/Staphylococcus group. Bacillus/Staphylococcus group. NCBI_TaxID=1279;
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                                                                                                                                                                                    1 CMYGGVTLHEGN 12
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                                                                                                                                                                                                                                                                                                Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        27536 MW;
                                                                                                                                                                                                                                                                                            90.1%;
83.3%;
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83.3%;
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                                                                                                                                                                                                                                                                                            Score 64;
Pred. No.
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Last annotation updat
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Pred. No. 0.00079;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    D660644660DE4191 CRC64;
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                                                                                                                                                                                                                                                            Mismatches
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                                                                                                                                                                                                                                                                                                                                Length 239;
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AC Q55
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PSEQUENCE FROM N.A.

MEDILINE-94011313; D., Roberson J.R., Lupher M., Bohach G.A.;

A Marr J.C., Lyon J.D., Roberson J.R., Lupher M., Bohach G.A.;

"Characterization of novel type C staphylococcal enterotoxins:

"I biological and evolutionary implications.";

L Infect. Immun. 61:4254-4262(1993).

EMBL; L13376; AAA36620.1;

PREMEL; L13376; AAA36620.1;

RHSSP; P34071; ISE2.

InterPro; IPR001961; Staph_Strep_toxin.

PR F10173; Stap_Strp_toxin; 1.

PROSITE; P800279; BACTRITOXIN.

PROSITE; PS00279; STAPH_STREP_TOXIN.1; 1.

PROSITE; PS00279; STAPH_STREP_TOXIN.2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 10; Conser
                                                                                                                                                                                                                                                                       EMBL; L13374; AAA26618.1;
HSSP; P34071; 1SE2;
InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1,
PROSITE; PS00278; STAPH_STREP_TOXIN_2,
PROSITE; PS00278; STAPH_STREP_TOXIN_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ERVENCE...... Staphylococcus aureus.
Staphylococcus aureus.
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacteria; Firmicutes; Bacillus/Clostridium group;
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Q53678;
Q1-NOV-1996
Q1-NOV-1996
Q1-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q06531 PRELIMINARY; PRT; 239 AA. Q06531; 01-NOV-1996 (TrEMBLrel. 01, Created) 01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-JUN-2001 (TrEMBLrel. 17, Last annotation update) ENTEROTOXIN TYPE C-4 (SEC4446) (FRAGMENT).
                                                   Enterotoxin; Toxin; Superantigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-4446;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Staphylococcus aureus.

Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.

NCBI_TaxID-1280;
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NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENTEROTOXIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   110 CMYGGITKHEGN 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CMYGGVTLHEGN 12
                                                                                                                                                                                                                                                       PYROGENIC EXOTOXINS ARE ALL RELATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
  239 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                239
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
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     27612 MW;
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27618
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83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MW;
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Last sequence update)
Last annotation update)
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Pred. No. 0.00081;
1; Mismatches 1;
  BB7BD6204731ED24 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A13E7EB25C6989C2 CRC64;
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                                                                                                                                                                                                                                                                                  ENTEROTOXINS AND S. PYOGENES
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Best Local Similarity
Matches 10; Conserv
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Best Local :
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                                                        Staphylococcus aureus.
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.
NCBI_TaxID=1280;
                                                                                                                  Q06533 PRELIMINARY; PRT; 239 AA. Q06533; Ol-NOV-1996 (TrEMBLrel. 01, Created) Ol-NOV-1996 (TrEMBLrel. 01, Last sequence update) Ol-JUN-2001 (TrEMBLrel. 17, Last annotation update) ENTEROTOXIN TYPE C (SECCOPELAND) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                              STAPHYLOCOCCAL FOOD POISONING SYNDROME.

-I- SIMILARITY: THE DIFFERENT S. AUREUS ENTEROTOXINS PYROGENIC EXOTOXINS ARE ALL RELATED.

EMBL; L13375; AAA26619.1; -.

HSSP; P34071; 1SE2.

Interpro; IPR001961; Staph_Strep_toxin.

Pfam; PF01123; Staph_Strep_toxin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q06532 PRELIMINARY; PRT; 239 AA. Q06532; 01-NOV-1996 (TrEMBLrel. 01, Created) 01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-JUN-2001 (TrEMBLrel. 17, Last annotation update) ENTEROTOXIN TYPE C-7 (SEC740N) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1;
PROSITE; PS00278; STAPH_STREP_TOXIN_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Marr J.C., Lyon J.D., Roberson J.R., Lupher M., Bohach G.A.; "Characterization of novel type C staphylococcal enterotoxins: biological and evolutionary implications."; Infect. Immun. 61:4254-4262(1993).
STRAIN-MNCOPELAND;
MEDLINE-94011313; PubMed-8406814;
Marr J.C., Lyon J.D., Roberson J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bacteria; Firmicutes; Bacillus/Clostridium group; Bacillus/Staphylococcus group; Staphylococcus. NCBI_TaxID=1280;
                                          SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Staphylococcus aureus.
                                                                                                                                                                                                                                                                                                                                                                                                             Enterotoxin; Toxin; Superantigen.
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10 CMYGGITKHEGN 121
                                                                                                                                                                                                                                                                          1 CMYGGVTLHEGN 12
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                                                                                                                                                                                                                                                                                                                                                                                   27642 MW;
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  Roberson J.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 64; DB
Pred. No. 0.00
1; Mismatches
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                                                                                                                                                                                                                                                                                                                            Score 64; E
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                   C77009F46BC8D645 CRC64;
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 Lupher M., Bohach G.A.;
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0.00081;
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Best Local
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                                                                                                                    Query Match
Best Local
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Q06534;
Q1-NOV-1996
Q1-NOV-1996
Q1-JUN-2001
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HSSP; P34071; 1STE.
InterPro; IRR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTELTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1; 1.
PROSITE; PS00278; STAPH_STREP_TOXIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Marr J.C., Lyon J.D., Roberson J.R., Lupher M., Bohach G.A.;
"Characterization of novel type C staphylococcal enterotoxins:
biological and evolutionary implications.";
Infect. Immun. 61:4254-4262(1933).
-i- DISEASE: STAPHYLOCOCCAL ENTEROTOXINS CAUSE THE INTOXICATION
STAPHYLOCOCCAL FOOD POISONING SYNDROME.
-i- SIMILARITY: THE DIFFERENT S. AUREUS ENTEROTOXINS AND S. PYO-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Enterotoxin; Toxin; Superantigen.

NON_TER 1 1
SEQUENCE 239 AA; 27517 MW; F3
                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Staphylococcus aureus.
Bacteria; Firmicutes; Bacillus/Clostridium group;
                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; L13379; AAA26623.1; HSSP; P34071; 1SE2.
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NCBI_TaxID=1280;
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                                                                                                                                                                                                                                                                                            PROSITE; PS00277; STAPH_STREP_TOXIN_1;
PROSITE; PS00278; STAPH_STREP_TOXIN_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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110
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                                            1 CMYGGYTLHEGN
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CMYGGITKHEGN
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                                                                                               10;
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10; Conserv
                                                                                                                       Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel. 01, Created)
(TrEMBLrel. 01, Last sequence update)
(TrEMBLrel. 17, Last annotation updat
                                                                                                  Conservative
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121
                                            12
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83.3%;
                                                                                                                    90.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         group; Staphylococcus.
                                                                                                                    Score 64; DB 2;
Pred. No. 0.00081;
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Pred. No. 0.
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                                                                                                                                                                                                                         F354742619C8D196 CRC64;
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                                                                                                                                           Length 239
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Best Local Similarity
Matches 10; Conser
Query Match
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O9F0L6;
01-MAR-2001 (TTEMBLTel. 1
01-MAR-2001 (TTEMBLTEL 1
01-JUN-2001 (TTEMBLTEL 1
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01.NOV-1996 (TrEMBLrel. 01,
01.NOV-1996 (TrEMBLrel. 01,
01.JUN-2001 (TrEMBLrel. 17,
ENTEROTOXIN TYPE C-3 (SEC3)
                                   PRINTS; F
SEQUENCE
                                            Staphylococcus aureus encoding multiple
J Bacteriol 183:63-70(2001)
EMBL; AF217235; AAG29599.1; -
Interpro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Interpro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLITOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1;
PROSITE; PS00278; STAPH_STREP_TOXIN_2;
Enterotoxin; Toxin; Superantigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=20566668; PubMed=11114901; Fitzgerald J.R., Monday S.R., Foster T.J., Meaney W.J., Smyth C.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. STRAIN-FRI 909;
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                                                                                                                                                                                                   Bacteria; Firmicutes; Bacillus/Clostridium group; Bacillus/Staphylococcus group; Staphylococcus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Enterotoxin; Toxin; NON_TER 1
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NCBI_TaxID=1280;
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                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                         NCBI_TaxID=1280
                                                                                                                                                                                                                          Staphylococcus aureus
                                                                                                                                                                                                                                        SEC-BOV
                                                                                                                                                                                                                                                   STAPHYLOCOCCAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Marr J.C., Lyon J.D., Roberson J.R., Lupher M., and There of novel type C staphylococcal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=94011313; PubMed=8406814;
                                                                                                                    "Characterization of a putative
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                                                                                                                                                                                                                                                                                                                                                                       CMYGGITKHEGN 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              239
                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                   ENTEROTOXIN
                                   31267 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27648 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                              90.1%;
                                                                                                                                                                                                                                                  16, Created)
16, Last sequence update)
17, Last annotation update)
XIN C-BOVINE.
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Last annotation update)
(FRAGMENT).
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                                                                                                                                                                                                                                                                                                                                                                                                                 Score 64; DB Pred. No. 0.00 1; Mismatches
  Score
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CC3CB3B04E4119E0 CRC64;
                                   3493F6228B042F10 CRC64;
                                                                                                                    pathogenicity island from bovine
  64.
                                                                                                                                                                                                                                                                                                             271
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0.00081;
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                                                                                                         superantigens.";
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                                                                                                                                           Bohach G.A., Hartigan
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 Length 271;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THE INTOXICATION
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RESULT
Q99SU3
ID Q9
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DT 01
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Best Local S
Matches 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SPECIES-S.aureus subsp. aureus N315;
Kuroda M., Ohta T., Uchiyama I., Baba T., Yuzawa H., Kobayashi Kuroda M., Outa T., Uchiyama I., Baba T., Lian J., Ito T., Kanar Cui L., Oguchi A., Aoki K.I., Nagai Y., Lian J., Ito T., Kanar Matsumaru H., Maruyama A., Murakami H., Hosoyama A., Mizutani Takahashi N.K., Sawano T., Inoue R.I., Kaito C., Sekimizu K., Takahashi N.K., Sawano T., Inoue R.I., Kaito C., Sekimizu K., Hirakawa H., Kuhara S., Goto S., Yabuzaki J., Kanehisa M., Yamashita A., Oshima K., Furuya K., Yoshino C., Shiba T., Hati Ogasawara N., Hayashi H., Hiramatsu K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SPECIES-S.aureus; STRAIN-A900322;
MEDLINE-20571956; PubMed-11123352;
Jarraud S., Peyrat M.A., Lim A., Tristan A., Bes M.,
Etienne J., Vandenesch F., Bonneville M., Lina G.;
"egc, A highly prevalent operon of enterotoxin gene,
nursery of superantigens in Staphylococcus aureus.";
J. Immunol. 166:669-677(2001).
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01-MAR-2001 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
                                    SEP
                                                                          Q99SU3;
01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2001 (TrEMBLrel. 17,
01-JUN-2001 (TrEMBLrel. 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Staphylococcus aureus subsp. aureus N315.
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEK (ENTEROTOXIN SEN).
SEK OR SEN OR SA1643.
        Staphylococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lancet 357:1225-1240(2001).

EMBL; AF288760; AAG36556.1; -.

EMBL; AF0281315; BAB42911.1; -.

InterPro; IPR001961; Staph_Strep_toxin.

Pfam; PF01123; Stap_Strp_toxin; 1.

PRINTS; PF00279; BAGTRETDXIN.

PROSITE; PS00277; STAPH_STREP_TOXIN_1;

PROSITE; PS00277; STAPH_STREP_TOXIN_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Whole genome sequencing of meticillin-resistant Staphylococcus aureus.";
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NCBI_TaxID=1280, 158879;
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                                                            ENTEROTOXIN P.
                                                                                                                                                                                            Q99SU3
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                              OR.
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                              SA1761.
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                                                                                                                                                                                               PRELIMINARY;
        aureus subsp.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                88.7%;
75.0%;
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Last annotation update)
                                                                                   Last sequence update)
Last annotation updat
                                                                                                                                       Created)
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Pred. No. 0.00
3; Mismatches
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        aureus N315
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Kanamori M.,
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RESULT
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O99T49;
O1-JUN-2001 (TrEMBLrel. 1:
O1-JUN-2001 (TrEMBLrel. 1:
O1-JUN-2001 (TrEMBLrel. 1:
ENTEROTOXIN YENT2.
Q9S5Z4
Q9S5Z4;
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kurode M., Ohta T., Uchiyama I., Baba T., Yuzawa H., Kobayashi I.,
Cul L., Oguchi A., Aoki K.I., Naggi Y., Lian J., Ito T., Kanamori M.,
Matsumaru H., Maruyama A., Murakami H., Hosoyama A., Mizutani-Ui Y.,
Takahashi N.K., Sawano T., Inoue R.I., Kaito C., Sekimizu K.,
Hirakawa H., Kuhara S., Goto S., Yabuzaki J., Kanehisa M.,
Yamashita A., Oshima K., Furuya K., Yoshino C., Shiba T., Hattori M.,
Ogasawara N., Haysshi H., Hiramatsu K.;
"Whole genome sequencing of meticillin-resistant Staphylococcus
aureus."
"Hosoyama S., Goto S., Yabuzaki J., Kanehisa M.,
Usamatsu K.;
Samatsu S., Samatsu K.;
Lancet 357:1225-1240(2001).
EMBL; AP003135; BAB42912.1; -.
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Whole genome sequencing of meticillin-resistant Staphylococcus aureus ";
Lancet 357:1225-1240(2001).

EMBL; AP003135; BAB43036.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Staphylococcus aureus subsp. aureus N315.
Bacteria; Firmicutes; Bacillus/clostridium group;
Bacillus/Staphylococcus group; Staphylococcus.
NCBI_TaxID-158879;
                                                                                                                                                                                                                                                                                                                                                                                                                      Complete proteome. SEQUENCE 136 AA;
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NCBI_TaxID=158879;
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CMYGGVTLHDNN 144
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  (TrEMBLrel. 13,
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                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                         15945 MW;
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83.3%;
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Last annotation update)
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Pred. No. 0.0021;
1; Mismatches
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Pred. No. 0.0015;
l; Mismatches
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Q9R931;
01-MAY-2000
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PRINTS; PR00279; BACTRLTOXIN
PROSITE; PS00277; STAPH_STREP_TOXIN_1; PROSITE; PS00278; STAPH_STREP_TOXIN_2; NON_TER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bessen D.E., Izzo M.W., Fiorentino T.R., Carin "Genetic linkage of exotoxin alleles and emm g tropisms in group A streptococci.", Submitted (OCT-1997) to the EMBL/GenBank/DDBJ EMBL; AF029051; AAD21315.1; -
                                                                                                                                NON_TER
                                                                                                                                                                     InterPro; IPR001961; Staph_Strep_toxin.
Pfam; PF01123; Stap_Strp_toxin; 1.
PRINTS; PR00279; BACTRLTOXIN.
PROSITE; PS00277; STAPH_STREP_TOXIN_1,
PROSITE; PS00278; STAPH_STREP_TOXIN_2;
                                                                                                                                                                                                                                                                                                                                 tropism in group A streptococci."; Submitted (MAR-1998) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                          Bessen D.E., Izzo M.W., fiorentino T.R., Hollingshead S.K., Beall B.; "Genetic linkage of exotoxin alleles and
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01-MAY-2000 (TrEMBLrel. 13,
01-JUN-2001 (TrEMBLrel. 17,
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                                                                                                                                                                                                                                                                                     EMBL; AF055698; AAD11624.1; HSSP; P08095; 1812.
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                                                                                                              SEQUENCE
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222 AA;
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83.3%;
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Pred. No. 0.004;
1; Mismatches
                    Score 60; DB 2;
Pred. No. 0.004;
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markers for tissue
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